THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

CONTROLLED POWER

. . . and how it is helping men
do a better job of lumber manufacture.

SEPTEMBER, 1959

Don't Price Yourself Out of the PLUS Features You Get with SQUARE D CONTROL CENTERS

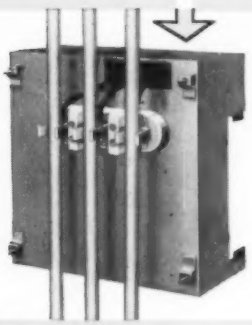
Industrial construction
All outer surfaces and structural parts are 12 gauge steel. Corner channels, cross members and doors are *formed* on special dies for maximum rigidity. Rust-resisting finish—phosphatized plus *baked* enamel.

Saves space
Unit heights in *3-inch* increments—an exclusive Square D advantage which permits use of units with minimum heights, eliminates the wasted space typical of modular systems.

Built-in safety
Units are metal-enclosed to confine damage should a fault occur. Unit side plates are permanently attached—can't be accidentally discarded. Switch-type units have visible blade disconnects for added safety.

Extra control flexibility
A variety of removable panels accommodates up to four oil-tight push buttons and pilot lights.

Tubular vertical buses
Another Square D "exclusive"—inherently stronger—greater cooling surface. Extra-wide spacing between phases gives added "breakdown" protection. Plug-in stabs are silver-plated copper backed by steel springs—give high pressure low resistance contact at all times.



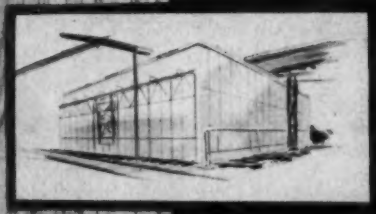
Liberal wiring space
Wiring channels are *large and accessible*. No wire fishing through narrow passageways—wires can be laid in position—less costly installation.

GET THE COMPLETE STORY
BULLETIN SM-244 gives detailed information on all of the "plus" advantages you get when you specify Square D motor control centers. Send for a copy. Square D Company, 4335 Valley Blvd., Los Angeles 32, Calif.

EC&M HEAVY INDUSTRY ELECTRICAL EQUIPMENT...NOW A PART OF THE SQUARE D LINE

SQUARE D COMPANY

HOW DRY I AM!



Suburban's clean, efficient and versatile LP-Gas gives you the driest heat and hottest flame of all for your dry kiln needs. Furthermore, a qualified and experienced engineering department is available to build and service your LP-Gas bulk storage facilities, regardless of size. Yes, lumbermen all over the west agree Suburban LP-Gas is dryer, hotter, cleaner and more efficient for their dry kiln operations. They now enjoy economies of operation never before realized through less maintenance, faster lighting and easier handling. Why not join this fast increasing group by converting your dry kilns to Suburban LP-Gas today!

THE WEST'S MOST DIVERSIFIED LP GAS COMPANY

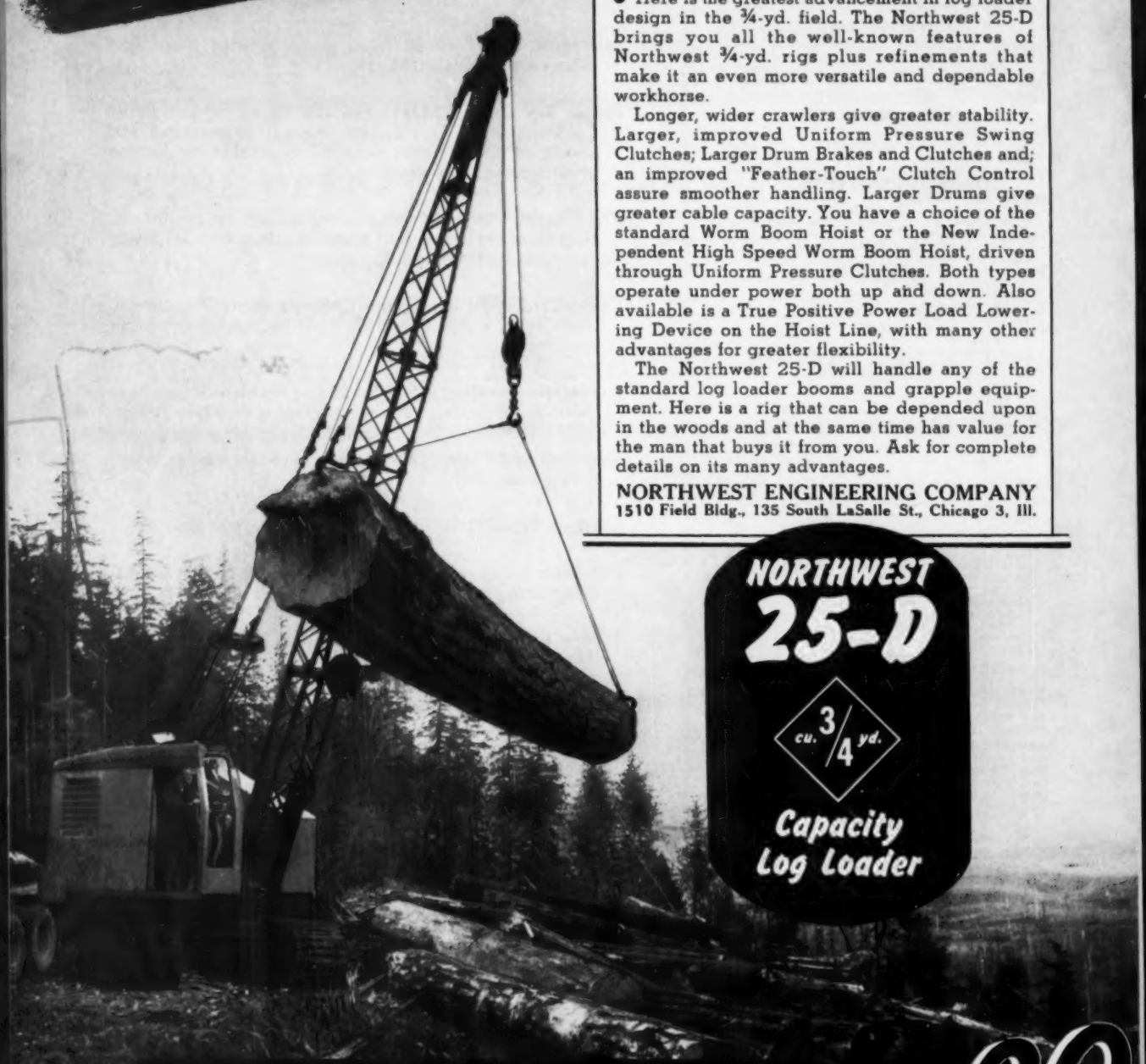
SUBURBAN GAS SERVICE

Your Neighbor—Throughout the West!

DIVISIONAL OFFICES: **DENVER 16, Colorado,** 3801 E. 56th Ave., ALpine 5-5446 • **PHOENIX, Arizona,** P. O. Box 11007, APplegate 8-8511 • **POMONA, California,** 2021 Towne Ave., NAtional 3-2121 • **PORTLAND 11, Oregon,** 641 NE Lombard St., BUtler 5-2561 • **SPOKANE 63, Washington,** 7909 E. Sprague St., WAlnut 4-2540 • **TACOMA, Washington,** 14012 Pacific Ave., LEnox 7-8641. In Tacoma it's Redi-Gas (a division of Suburban Gas Service)

for lumber manufacturing structures—
MORE CLEAR WORK AREA IN SOULÉ BUILDINGS Plywood plants, chain, mill and storage facilities are achieved faster at bigger savings in time and money with Soulé Buildings. Clear span interiors are ideal for handling timber, help you lay-out continuous manufacturing operations.
Exclusive "Two Barrier" protection assures rain-proof roofs for safe, dry plants and warehouses.
Soulé
LEADER IN STEEL BUILDINGS
SOULE' STEEL CO
SOULÉ STEEL COMPANY • San Francisco • Los Angeles • San Diego • Portland • Seattle • Spokane • Phoenix • Dallas • Salt Lake City

A WORKHORSE RIG for workhorse jobs!



● Here is the greatest advancement in log loader design in the ¾-yd. field. The Northwest 25-D brings you all the well-known features of Northwest ¾-yd. rigs plus refinements that make it an even more versatile and dependable workhorse.

Longer, wider crawlers give greater stability. Larger, improved Uniform Pressure Swing Clutches; Larger Drum Brakes and Clutches and; an improved "Feather-Touch" Clutch Control assure smoother handling. Larger Drums give greater cable capacity. You have a choice of the standard Worm Boom Hoist or the New Independent High Speed Worm Boom Hoist, driven through Uniform Pressure Clutches. Both types operate under power both up and down. Also available is a True Positive Power Load Lowering Device on the Hoist Line, with many other advantages for greater flexibility.

The Northwest 25-D will handle any of the standard log loader booms and grapple equipment. Here is a rig that can be depended upon in the woods and at the same time has value for the man that buys it from you. Ask for complete details on its many advantages.

NORTHWEST ENGINEERING COMPANY
1510 Field Bldg., 135 South LaSalle St., Chicago 3, Ill.

NORTHWEST 25-D
cu. 3/4 yd.
Capacity Log Loader

NORTHWEST *Always Ready to* GO

NORTHWEST SALES OFFICES:

SEATTLE, WASHINGTON
1234 Sixth Avenue, South

SAN FRANCISCO, CALIFORNIA
255 Tenth Street

VERNON, CALIFORNIA
3707 Santa Fe Avenue

C-25-5-LG

VOLUME 86 • NUMBER 9

SEPTEMBER, 1959

EDITORIAL STAFF

W. E. CROSBY.....Editorial Director
DEAN F. SHERMAN.....Editor
LEE R. FLATBERG.....Managing Editor
WARD C. WILLIAMS.....Associate Editor
STANLEY M. JEPSEN.....Associate Editor
HAROLD H. KEIL.....Associate Editor
HERBERT G. LAMBERT.....Canadian Editor
CHARLES L. SHAW.....Canadian Editor

BUSINESS STAFF

JAMES C. WALLACE.....Business Manager
CHARLES W. COWMAN.....Sales Manager
J. B. OLSON.....Special Services Sales Manager
JOHN LAUGHLIN.....Production Manager
CHARLES C. BAAKE.....Circulation Manager

PUBLISHING OFFICES

PORTLAND 5, OREGON
731 S. W. Oak St., CApitol 2-1314
Cable: Milfreepub

ADVERTISING OFFICES

PORTLAND 5, OREGON
731 S. W. Oak St., CApitol 2-1314
C. W. Cowman, J. C. Wallace, J. B. Olson
SEATTLE 4, WASHINGTON
71 Columbia St., MAin 2-1626
Cable: Milfreepub
SAN FRANCISCO 5, CALIFORNIA
500 Howard St., EXbrook 7-1881
Stuart F. Leete
Cable: Milfreepub
VANCOUVER 3, B. C.
402 Pender St., W., MUtual 5-7287
C. L. Shaw
Cable: Milfreepub
LOS ANGELES 65, CALIFORNIA
3501 Eagle Rock Blvd., CLinton 5-7194
Raul Rodriguez
NEW YORK 17, NEW YORK
370 Lexington Ave., MUrray Hill 3-9294
Cable: Milfreepub
CHICAGO 26, ILLINOIS
1791 Howard St., ROgers Park 4-3420
E. T. Wang
Cable: Milfreepub
CLEVELAND 3, OHIO
4500 Euclid Ave., EXpress 1-4180
Kenneth A. Kruse
LONDON W.1, ENGLAND
130 Crawford St. (Corner Baker St.)
Cable: Milfreepub
Max F. Holsinger,
General Manager, International Operations
Bernard W. Lansdowne,
Manager, United Kingdom
KOLN-KALK, WEST GERMANY
Kanstrasse 22
Dr. Walter F. Vogeno, Director
Continental European Operations
Cable: Milfreepub

PUBLISHED monthly, except in December when semi-monthly, by MILLER FREEMAN PUBLICATIONS, 731 Southwest Oak Street, Portland 5, Oregon. Entered as second-class matter at the Post Office at Portland, Oregon, under Act of March 4, 1879.

ADVERTISING—Complete plates only should be sent to: THE LUMBERMAN, 102 N.W. Ninth Ave., Portland 9, Oregon. Advertising copy and cuts, insertion orders and all instructions should be sent to the publishing office: 731 Southwest Oak Street, Portland 5, Oregon.

Member of
Audit Bureau of Circulation
and The Associated
Business Publications

SUBSCRIPTION RATES—U. S., Canada, Mexico and other Pan American Union members—One year $4.00; two years $6.00; three years $8.00. Other countries—one year $5.00; two years $8.00; three years $11.00; Single copy 50 cents except Annual Plywood Review number $1.00.

CHANGE OF ADDRESS—Send subscription orders and changes of address to Subscription Department, THE LUMBERMAN, 500 Howard Street, San Francisco 5, California. Include both old and new address and zone number.

COPYRIGHT, 1959, by Miller Freeman Publications, Incorporated. Contents may not be reproduced without permission.

POSTMASTER: Please send Notice 3579 to THE LUMBERMAN, 500 Howard St., San Francisco 5, California.

A MILLER FREEMAN PUBLICATION

OFFICERS

WM. B. FREEMAN.....President
LAWRENCE K. SMITH.....Vice-President
MILLER FREEMAN, JR.....Secretary-Treasurer

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

Standards You Face as more uniformity of plant and product becomes essential. 33

Finger Tip Control Makes the Job Easier at automated California mill. This system, easy to understand and simple to operate, has resulted in greater production of a higher quality product. 34

The "Trend" Sawmill reduces manpower requirements, simplifies operation with latest developments in power supply and control mechanisms. 36

Closed Circuit TV and Remote Controls team to handle mill fuel for a cleaner operation with increased safety for workmen. 40

Automatic Handling Solves Small Log Problem at southern mill cutting lumber from logs averaging only 8½ inches. 42

Resawing and Edging Combined in One Linebar for selection of cants behind the trimmer. 44

Carriage Travel Reduced through relocation of sawyer. 64

2x4 Plant Handles Small Logs Profitably with semi-automatic Scragg and planing mills housed under one roof. 66

5 Men Produce 90,000 Feet Daily in highly automated dimension mill of C&D Lumber Co., Riddle, Ore. 70

Sawmill Automation Is Here Today. 72

Electric Drive and Control Developments in the lumber industry. 76

Controls Simplify Veneer Manufacture. 83

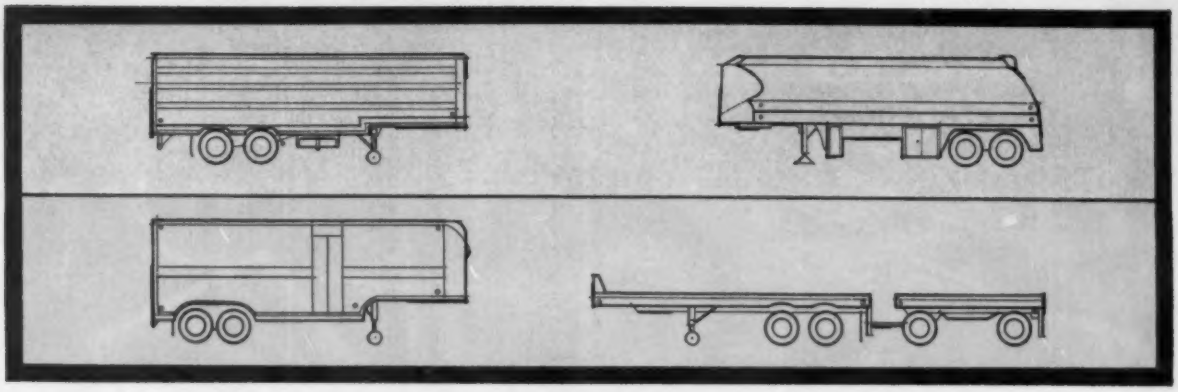
Clipper Operator Handles His Own Spotting with movable, condensed panel. 84

Semi-Automatic Charger combines hydraulics and electric operation for fast, accurate, handling on veneer lathes. 86

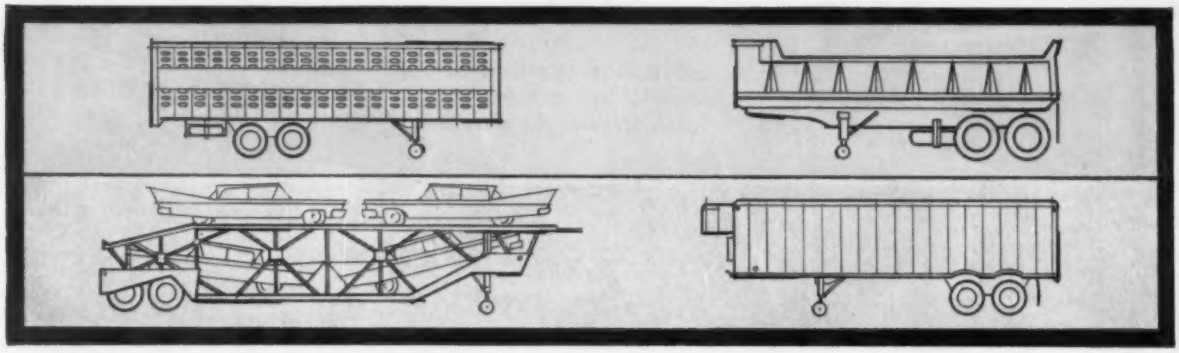
Tips From a Machinery Appraiser on how to secure financing. 90

DEPARTMENTS

Significant Industry News	8	Lumber Prices	87
Industry Trends	10	Machinery & Equipment	95
Industry Meetings	24	Buyers' Guide	98
Forest Products Stocks	78	Advertisers' Index	112



MORE OPERATORS AND MANUFACTURERS SPECIFY MORE TIMKEN-DETROIT® TRAILER AXLES THAN ALL OTHER MAKES COMBINED!



Timken-Detroit Trailer Axles—the overwhelming choice of the trucking industry—are produced in the world's largest trailer axle plant. Here unmatched production, research, and testing facilities are combined with 50 years of axle building experience to bring you these outstanding advantages:

Time-proved low maintenance costs! Proven by billions of rugged service miles, Timken-Detroit Trailer Axles are famous for providing maximum safety, less maintenance and more payload.

Pioneers of light weight and strength! Weight saving is accomplished entirely through superior design and construction . . . with no reduction in strength or quality.

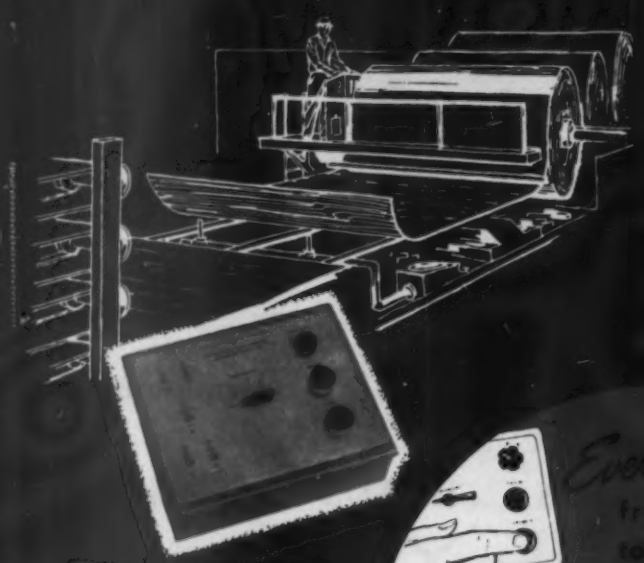
Imitated but never equaled! Timken-Detroit TK-500 Series Trailer Axles are still the lightest, safest, most rugged you can buy.

Finest quality! Part for part, Timken-Detroit Trailer Axles incorporate the finest-quality materials, precision workmanship and most advanced design.

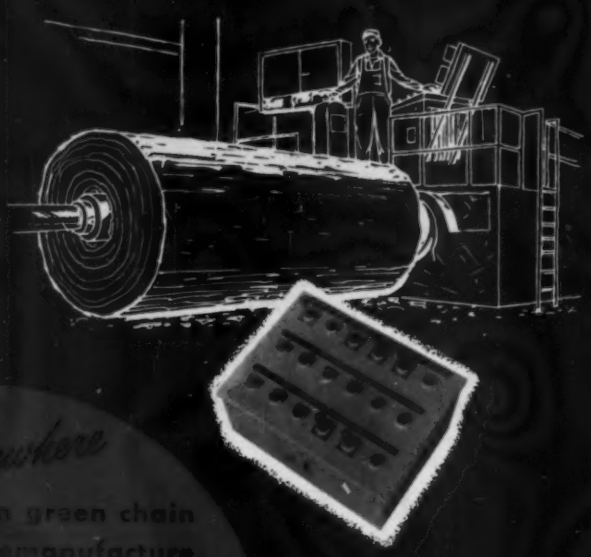
For safe, economical operation, specify and insist upon lightweight Timken-Detroit Trailer Axles.

Another Product of... **ROCKWELL-STANDARD CORPORATION**

Transmission and Axle Division, Detroit 32, Michigan



AUTOMATIC TRAY CONTROL SYSTEMS by Redco give plywood lathe operators finger-tip command of all tray and tipple functions, achieving substantial savings in labor, increased production and improved grade recovery.



REDCO AUTOMATIC LATHE CONTROL changes spindles automatically permitting uninterrupted peeling of large logs down to a 5" core. Simplicity of system improves operator concentration, upgrading peeling quality and production.

Everywhere

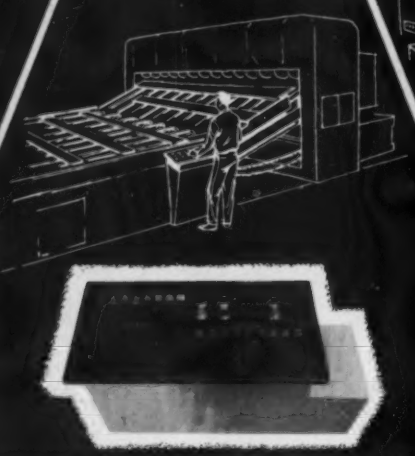
from green chain to remanufacture

Everything

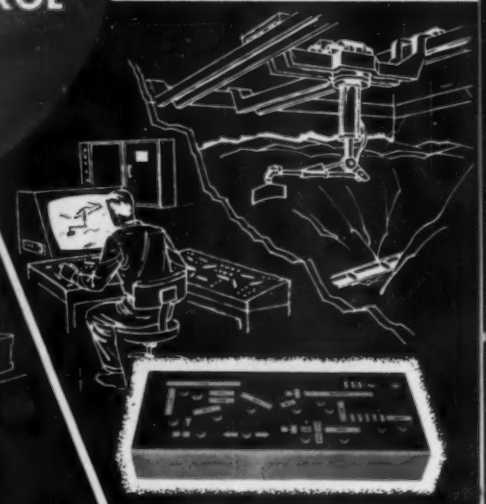
IS UNDER CONTROL WITH REDCO

advanced systems of automation control for lumber and plywood

REMOTE EDGER CONTROLS exemplify Redco's engineering concept of custom tailoring automation control systems to specific plant and specific job requirements.



REDCO MAGNETIC MEMORY CONTROLS offer a compact unitized system adaptable to trim saws and any grading or sorting operation. Push button handling decision can be made at any convenient point on the production line and committed to data storage box, assuring accurate, automatic execution at proper production stage.



TV CONTROLLED FUEL BIN HOE CRANE is a typical specialized Redco control application affording safe, efficient, remote control direction of fuel bin loading in a particle board plant.

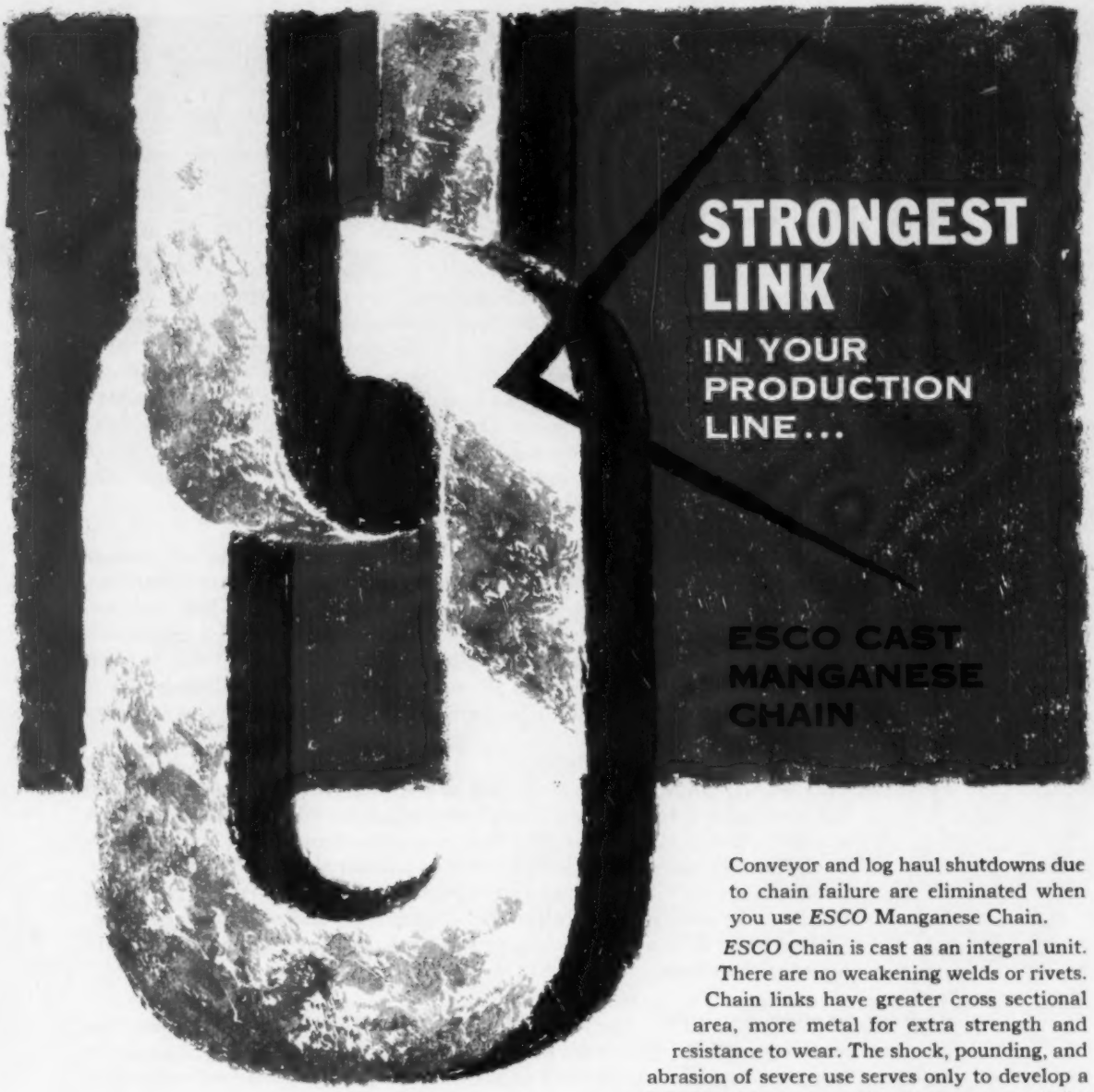
redco

On any automation program you may be considering now or in the future, you are invited to draw on Redco's reservoir of experience in getting your specific production problems "under control" dependably, efficiently and economically. Write for complete information.

Republic ELECTRIC & DEVELOPMENT CO.

2627 WESTERN AVENUE • SEATTLE 3, WASHINGTON

Redco engineered control systems for the Forest Products Industry



STRONGEST LINK IN YOUR PRODUCTION LINE...

ESCO CAST MANGANESE CHAIN

Conveyor and log haul shutdowns due to chain failure are eliminated when you use *ESCO* Manganese Chain.

ESCO Chain is cast as an integral unit. There are no weakening welds or rivets. Chain links have greater cross sectional area, more metal for extra strength and resistance to wear. The shock, pounding, and abrasion of severe use serves only to develop a polished, highly wear–resistant surface on *ESCO* Manganese Chain. Twenty-five years in supplying uniform, high quality chain to the lumber industry is your guarantee of trouble-free service.

For details on *ESCO* Chain, Conveyor Flights, Log Haul Chairs, Sprockets, Drums, Nigger Bars and Carriage Wheels, contact your nearest *ESCO* Sales Office.

Diagram shows full bearing area of ESCO Chain contrasted with single point contact of round link chain.

ESCO Chain averages 19% greater cross sectional area than round link chain.

ESCO®

ELECTRIC STEEL FOUNDRY COMPANY

2151 N. W. 25TH AVE. • PORTLAND 10, OREGON

MFG. PLANTS AT PORTLAND, ORE. AND DANVILLE, ILL.
Offices in Most Principal Cities
ESCO INTERNATIONAL, NEW YORK, N. Y. • IN CANADA ESCO LIMITED

significant industry news

General Outlook . . .

PHILIPPINE PRODUCERS ASK GOVERNMENT HELP . . . A. de las Alas, president of the Philippine Lumber Producers Association, has urged his government to aid and assist domestic Philippine manufacturers "to attain the highest possible efficiency and thus the lowest possible unit cost of processing". Alas was recently asked by the government to study ways to industrialize the republic's forest resources. Alas asks lower taxes, more liberal credit and granting of foreign exchange to bring in machinery to increase efficiency of domestic plants. He says the Philippines will become more competitive with the Japanese through intensification of production efficiency rather than by legislating the Japanese out of the Philippine log supply market.

CANADA CUTS JAPANESE PLYWOOD IMPORTS . . . Insistance of eastern Canadian plywood manufacturers has resulted in the Canadian government restricting imports of Japanese mahogany plywood. British Columbia plywood manufacturers have generally been indifferent to Japanese imports. Sales quotas this year are being based on 1958's sales total of about $3.4 million. Trade in Japanese plywood has been increasing sharply in recent years. The 1958 total was 29% greater than 1957. Imports in the first quarter of 1959 were 64% higher than the same period of 1958.

FIREPROOFED WOOD GAINS . . . New York City and Washington state have recognized the potential of fireproofed wood as a construction material. In Washington, the insurance rating bureau has classified as non-combustible material pressure treated wood approved by the Underwriters' Laboratories, Inc. The reclassification brings with it a fire insurance rate nearly equal to masonry-concrete buildings. New York City changed its building code and now recognizes fireproofed wood as structurally equal to steel and other metals used in one-story industrial buildings.

NEW WOOD USES SOUGHT . . . The Mississippi Industrial Research Center in Jackson has received a $40,000 grant from the Small Business Administration to be used to help small scale manufacturers in the state find new outlets in the furniture and other wood products fields. Mississippi appears to be ideally suited for development of smaller wood processing plants. Its timber, which covers half the state, is mostly in small ownerships.

LEE, SIMPSON MERGE, PLAN PLANT . . . Simpson Paper Co., Everett, Wash., and Lee Paper Co., Vicksburg, Mich., plan to merge and have announced plans for construction of a $7 million paper processing plant near Ripon, Calif. The new company will be called Simpson Lee Paper Co. Simpson Paper is a wholly-owned subsidiary of Simpson Timber Co., Shelton, Wash.

NORTH CAROLINA PLANT SOLD . . . Wood-Mosaic Corp., Louisville, N. C., is purchasing W. G. Knowles Lumber Co., Biltmore, N. C. The new owner plans to continue operation of the band sawmill to produce walnut lumber for the furniture trade and woodworking industry. Wood-Mosaic expects to produce about 2 million feet annually of steam-treated walnut.

More INDUSTRY NEWS on Page 12

LOW-COST END-COATING FOR LOGS, LUMBER, TIMBERS

- Controls end-checking and reduces losses due to degrade
- Economical to use . . . costs just about one cent or less per square foot, applied
- Easy to apply by spray, brush or swab
- Effective for kiln drying as well as air seasoning
- Permits safe cold-decking of logs to insure uninterrupted mill operation
- Available in clear liquid and several brilliant colors
- Extremely stable in storage
- Prompt shipment in 55-gallon drums from Chapman Chemical Company plants and warehouses throughout the United States and in Canada and Mexico

MAIL COUPON FOR NEW ILLUSTRATED BOOKLET

CHAPMAN®

SEALTITE END-COATING

CHAPMAN CHEMICAL COMPANY

Leading manufacturer of wood preservatives

Memphis 1, Tenn.

Palo Alto, Cal., Portland, Ore., Minneapolis, Charlotte, N. C.

Chapman Chemical Company
Memphis 1, Tenn.

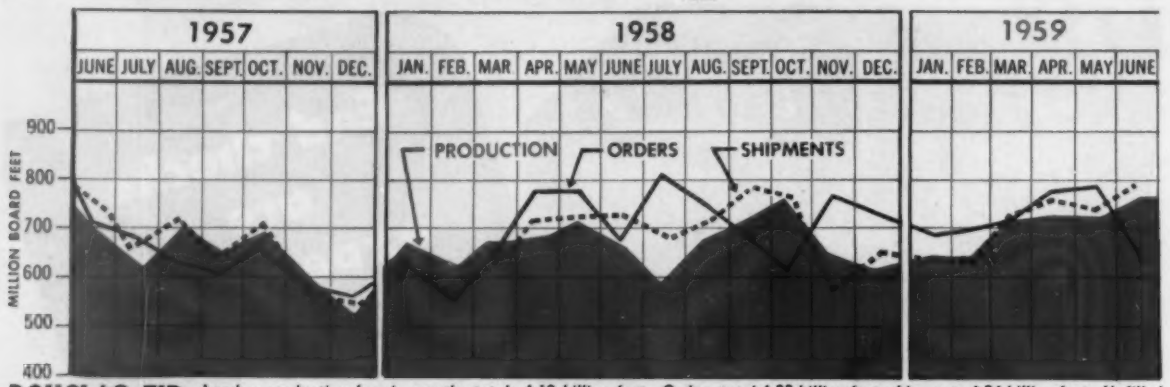
Send booklet on SEALTITE to:

Name_____

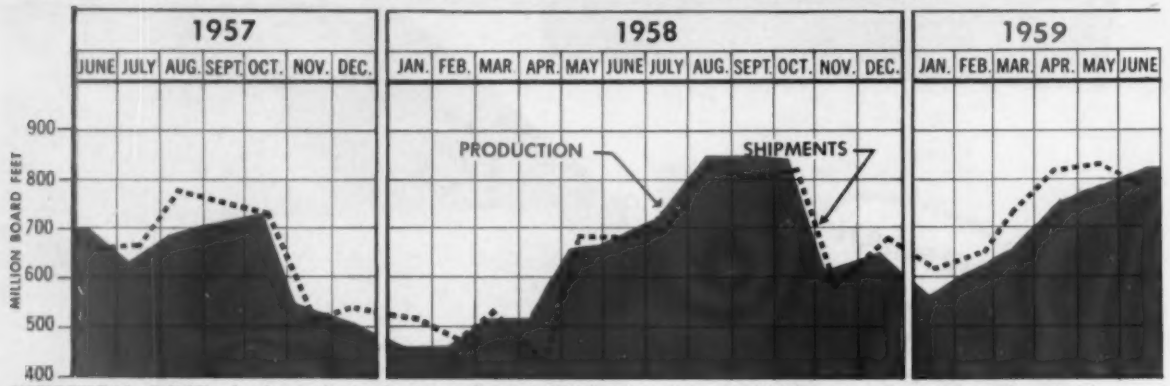
Address_____

_____

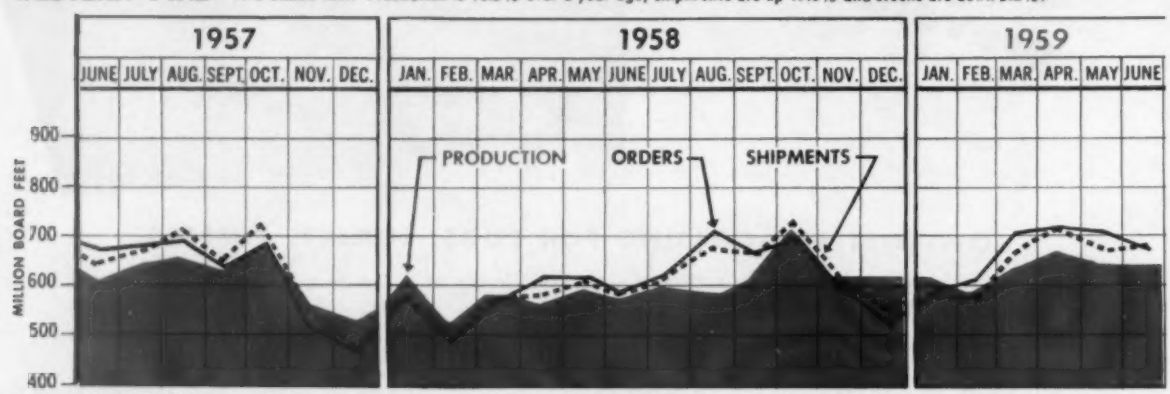
INDUSTRY TRENDS (See more TRENDS on page 14)



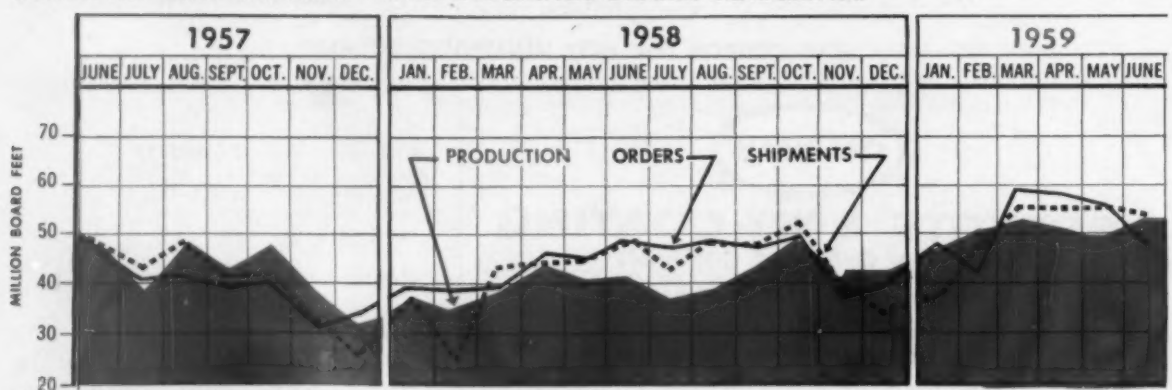
DOUGLAS FIR Lumber production for six months totals 4.19 billion feet. Orders total 4.22 billion feet, shipments 4.24 billion feet. Unfilled orders at the end of June total 579 million feet. Inventory at the end of June is 826 million feet.



WESTERN PINE Lumber production for six months totals 4.2 billion feet, shipments 4.4 billion feet. Gross stocks at the end of June total 1.78 billion feet. Production is 18.5% over a year ago; shipments are up 19.8% and stocks are down 5.2%.



SOUTHERN PINE Lumber production for six months totals 3.79 billion feet, shipments 3.76 billion feet, orders 3.98 billion feet. Unfilled orders total 278 million feet at the end of June. Gross stocks total 1.7 billion feet.



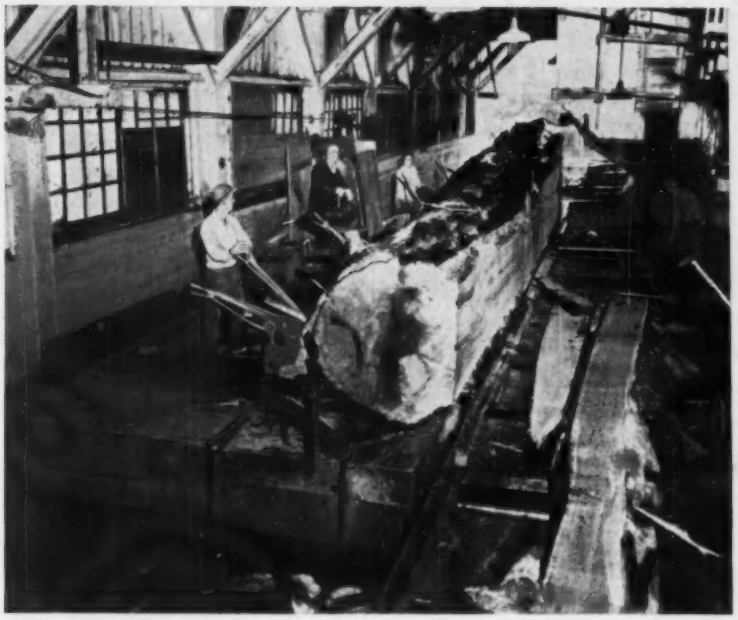
REDWOOD Lumber production for six months totals 309 million feet, shipments 297 million feet, orders 312 million feet. Orders at the end of June total 75 million feet vs. 57 million feet a year ago. Stocks of 371 million feet compare with 384 million feet year ago.

STANDARD ENGINEER'S FIELD REPORT

PRODUCT **Chevron Cylinder Oil**

FIRM **Walton Lumber Co. Everett, Washington**

Steam engines work 31 years without repairs

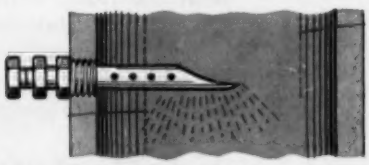


Chevron Cylinder Oil has lubricated all steam powered equipment at Walton Lumber Company since 1927. In all this time, firm has never repaired or replaced any lubricated part. Chevron Cylinder Oil helps sawyer get instant response from engine powering main log carriage (above).

Hydrostatic lubricator feeds oil to main steam engine and smaller locomotive-type compressors in all parts of mill. Lubricator holds 16 gallons of Chevron Cylinder Oil.

Mill Superintendent John Clem (left) and Chief Engineer Frank Bulus (right) report Chevron Cylinder Oil gives excellent service in all their steam equipment including this 15-inch by 20-inch twin Sumner engine which powers main log carriage. They started using Chevron Cylinder Oil when mill was rebuilt and have continued using it for over 31 years.

How Chevron Cylinder Oils cut lubrication costs



- Lubricate economically and efficiently with freedom from carbon in temperatures from 375°F. to 550°F.
- Atomize readily in steam and separates easily from exhaust steam and condensate.
- Various grades to meet mechanical requirements of installations.

For More Information on this or other petroleum products contact your Standard Engineer or Representative, or write Standard Oil Company of California, 225 Bush St., San Francisco 20, California.

CHEVRON Industrial Lubricants

TRADEMARK "CHEVRON" AND CHEVRON DESIGN REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA

ICC PROHIBITS LUMBER TRANSIT DELAYS . . . The Interstate Commerce Commission has directed seven western railroads to cancel, not later than September 8, revisions in their published operating regulations which permit lumber shipments to be held up along the way for as much as 15 days without car demurrage charges. The ICC several years ago made a similar ruling which was followed by an offer from Canadian railroads of 15 days of free parking for lumber shipments headed east. Seven railroads serving the west followed suit. Small mill operators are expected to challenge the ruling.

FIRMS EYE CANADIAN COLLIERIES, LTD . . . Several offers have been received for purchase of some or all of the assets of Canadian Collieries, Inc., which owns several lumber and plywood properties in British Columbia. Norman Whittall, president of the firm says: "I don't want anyone to think we are selling out, but it may well be that in the near future something like that may happen." Among the company's holdings are the former Timberland Lumber Co. sawmill and shingle plant at New Westminster and Flavelle Cedar at Port Moody.

MICHIGAN TIMBER PURCHASED . . . Calumet & Hecla, Inc. has purchased 24,200 acres of timberland and timber rights on the Upper Peninsula of Michigan from Atlas Plywood Corp. Goodman Lumber division of Calumet, operator of a sawmill and veneer plant at Goodman, Wis., and a sawmill at Mohawk, Mich., handled the purchase. The timber is located in Luce and Chippewa Counties. Calumet's timber holdings in Michigan and Wisconsin now total 300,000 acres.

AUSTRALIA CONTINUES IMPORT CONTROLS . . . Despite other licensing concessions recently announced to "protect traditional importers," Australia is continuing its import controls on lumber from North America. Traditional importers of lumber from Canada and the United States have only small import quotas now. Controls will continue until quotas of the traditional importers can be expanded sufficiently for them to hold their business against competition of newcomers.

HARBOR, HUNT TALK MERGER . . . The merger of Harbor Plywood Corp. into Hunt Food & Industries, Inc. is being negotiated. Any decision would have to be backed by stockholder action. Norton Simon, board chairman of both companies, says Hunt would push Harbor's expansion, manufacturing and marketing activities if the merger is affected.

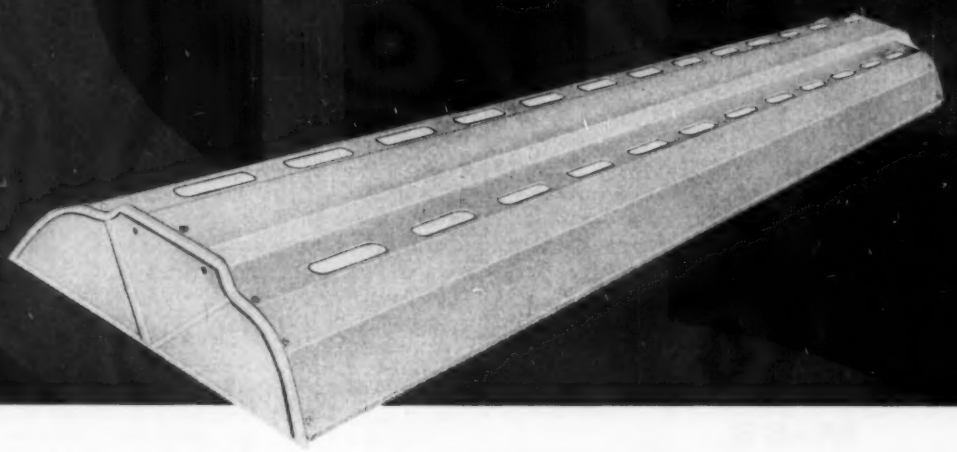
At the Plant Front . . .

SPECIALTY VENEER PLANT PLANNED . . . Conrad Veneers, Inc., Tualatin, Ore., has started construction on a specialty veneer plant which will produce hardwood and softwood sliced veneers. The firm will use foreign and domestic species. Production will run 50,000 to 150,000 square feet, 1/16-inch basis, a day, depending on species being sliced. Other equipment will include a splicer and drying facilities. Production is anticipated by the end of the year.

PLYWOOD PLANT PRODUCING . . . Weyerhaeuser Timber Co. has started production at its new plywood plant at Snoqualmie Falls, Wash. The new plant will eventually produce 60 million feet, ⅜-inch basis, a year. Addition of the plywood plant will help WTC increase utilization of timber from its adjacent Snoqualmie Falls Tree Farm.

More INDUSTRY NEWS on Page 16

This ELSCO fixture can cut your lighting costs 55% ...double lighting efficiency!



If you're planning a new building or remodeling a present structure this dramatic new ELSCO system of lighting deserves your first consideration ... actually *doubles* past recommended levels of lighting efficiency.

This is ELSCO's Vue-Eze, an industrial two-lamp fluorescent fixture that means lower cost—initially and throughout a longer working life. Vue-Eze means fewer units. A single 8-foot Vue-Eze Fixture, equipped with two Power-Groove, VHO or SHO lamps delivers 30,000 lumens. Recommended mounting heights up to 50 feet. Vue-Eze all-aluminum baked enamel reflectors are slotted to create a warm-air "chimney" effect—an updraft action that helps to keep dirt and dust particles off lamp and reflecting surfaces, minimize costly fixture washing. These same apertures provide 25% upward lighting that washes out harsh ceiling contrasts, balances brightness between the work level and areas above eye level. This combined with scientifically designed shielding reduces glare, minimizes eye strain and worker fatigue. Employees work in new comfort... *with greater productivity!*

The complete ELSCO Vue-Eze Story is yours for the asking—plus specific information on how to get the highest lighting levels in your plant for the least cost.

Manufacturers of famous ELSCO Grading Lights

ELSCO

Electric Lighting, Inc.

STOCKTON, CALIFORNIA • ATLANTA, GEORGIA

Electric Lighting, Inc.
533 San Juan Ave. • Stockton, California

Please send me, FREE, full details on ELSCO Vue-Eze Industrial Lighting.

NAME AND TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

Planning Construction?

FABRICATED STEEL

COMPONENT PARTS for

- Log Hauls
- Conveyors
- Side Lifts
- Deck Skids
- Machinery Bases
- Structural Steel Buildings

CALL: BUtler 5-2517 OR WRITE

LEWIS-RIFFEL, Inc.

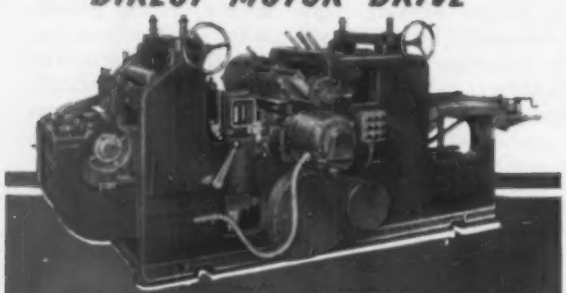
P. O. BOX 4257
PORTLAND 8, ORE.

ESTIMATES GLADLY

NEWMAN

M-68

DIRECT MOTOR DRIVE



PLANER & MATCHER

A six roll ALL ELECTRIC medium feed machine

Feeds to 175 feet per minute. Feed gears heat treated and interchangeable. The M-68 DMD is extremely close coupled to insure ACCURATE SIZING WITH SUPERIOR FINISH

HORSEPOWER
Top Cylinder: 40 — Bottom Cylinder: 20 — Profiler: 15
Side Heads: 15 and 20 — Feed: 7½

NEWMAN MACHINE CO. INC.
Greensboro North Carolina U.S.A.

INDUSTRY TRENDS

(Continued from page 10)

FIR PLYWOOD CONTINUES AHEAD OF 1958. Production of fir plywood in Oregon, Washington, California and Montana in the second quarter of 1959 totaled 2 billion square feet, 37.7% ahead of the second quarter of 1958. The 2 billion square foot total breaks down to 1.2 billion square feet sanded, 8 million feet unsanded.

New orders of 1.7 billion feet are 8.5% ahead of 1.6 billion square feet in the same period of 1958. Sanded totaled 974 million square feet, unsanded 720 million square feet.

Shipments of just under 2 billion feet are 29.2% ahead of a year ago. Sanded totaled 1.2 billion feet, unsanded 800 million.

These figures are reported by the Douglas Fir Plywood Association whose membership represents 84% of the industry capacity. The remaining production for the period is estimated.

CONSTRUCTION TOTALS REMAIN HIGH. New construction put in place in July is up seasonally to $5.2 billion, the Bureau of Census reports. This is an increase of 3% over June and 14% over July, 1958. Total value of work put in place in the first seven months is $30.1 billion, 15% ahead of the same period of 1958.

Private construction outlays are up seasonally in July to $3.6 billion, for the seven months to $21.2 billion. New residential construction, which shows no appreciable seasonal change in July, accounts for the 1959 increase in private construction.

BUSINESS MOVES UP IN FIRST HALF. The office of Business of the Department of Commerce says the business curve was up in the first half of 1959. Consumer purchasing of major types of goods established a new record, registering new highs on both a dollar and volume basis.

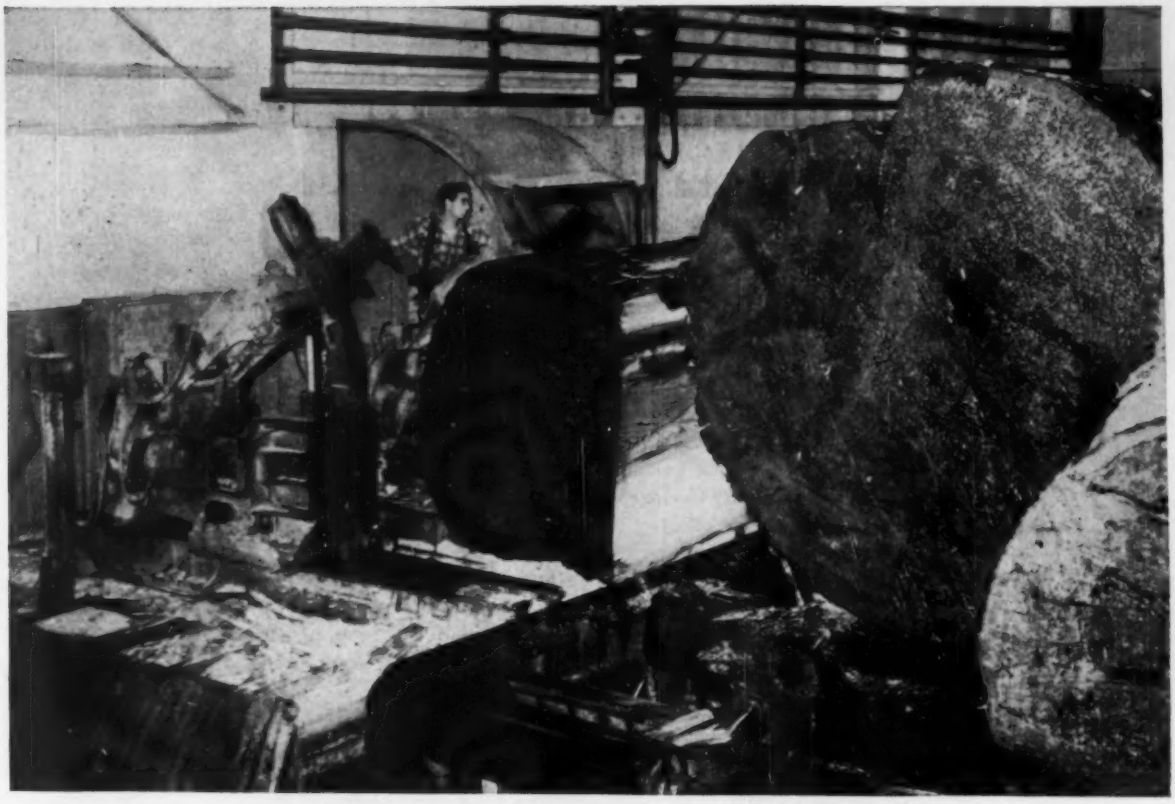
Employment continues to gain, personal incomes are up. Added income is keeping retail sales strong.

Corporate profits are close to their pre-recession highs. The first quarter annual profit rate of $45.5 billion was $2 billion above the closing quarter of 1958 and about equal to the high established in the autumn of 1955.

REDWOOD CONTINUES STRONG. Redwood shipments by the major redwood mills during the first half of 1959 were more than 23% above shipments during the first six months of 1958. Shipments in the first half of 1959 totaled 297 million feet. Production of 309 million feet is 31% ahead of a year ago. Orders during the period totaled 312 million feet, pushing the unfilled order file to 75 million feet. Stocks of 370 million feet are lowest in the past six weeks.

CARLOADINGS GAIN. Forest products led all commodity groups in carloadings from the Pacific Northwest in June. Loadings totaled 46,676 cars vs. 42,134 a year ago, a gain of 10.8%. Carloadings of forest products in the first six months total 226,326 cars, up 14.8% from a year ago.

EUROPE'S FORESTS INCREASE YIELD. Production of industrial wood in Europe has increased by more than 25% in the past decade, it was reported at the 10th session of the European Forestry Commission meeting in Rome, Italy. Egon Glesinger, director of the forestry and forest products division of FAO, said production has risen to about 200 million cubic meters from 160 million cubic meters a decade ago. Consumption of wood per person has gone up by 14%. Forestry has become one of the sectors of the European economy which has repaid governmental investment.



Are you using too many lubricants in your mill?

Count 'em up. Right now. Just to see how you can cut maintenance costs. See how many different oils and greases you use for bearings, gears, column guides, roller chains, press roll cylinders, arbors, and all your other equipment.

Chances are, a Texaco Lubrication Engineer can help you reduce this number of lubricants. This means you'd reduce inventory and storage problems . . . minimize dangers of misapplication . . . simplify feeding in centralized lubrication systems.

What's more, you'd have the proper lubricants and lubrication procedures to meet the specific needs of your mill equipment. For example, you might have only these four lubricants for all your major equipment:

• **Multifak #2** for all ball, roller and sleeve bearings. Multifak remains stable, resists oxidation and pressure, stands up under a wide temperature range.

• **Regal Oil R&O** for all hydraulic and air compressor applications. Regal Oil R&O prevents rust, sludge and foam, keeps equipment operating dependably.

• **Meropa Lubricant** for gear drives—stands up under severe pressure, heat and moisture. Also resists oxidation, foaming and thickening.

• **Texaco steam cylinder oils.** They atomize completely, resist wear, wash-off and extreme heat . . . assure steam-tight rings and smoothly functioning valves.

To have a Texaco Lubrication Engineer work out your particular plan and suggest the lubricants you need, just call the nearest of the more than 2,300 Texaco Distributing Plants or write:

Texaco Inc., 135 East 42nd Street, New York 17, N.Y.

Tune In: Texaco Huntley-Brinkley Report, Mon.-Fri.-NBC-TV

TEXACO

Throughout the United States

Canada • Latin America • West Africa

LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

(PARTS, INVENTORY, PRODUCTION, DOWNTIME, MAINTENANCE)

POWELL RIVER ADDING CHARCOAL . . . A charcoal plant which produces the product by a continuous method as opposed to the conventional batch process will be added to wood utilization facilities of Powell River Co. either at New Westminster or Port Kells, B. C. The process was developed by W. K. Schmidt. Powell River will use sawmill residues, mostly cedar, and will process it in other than cordwood lots. The plant is expected to be the largest on the Pacific coast.

FANCY-FACE VENEER PLANT OPERATING . . . Treeco Veneers, Inc., Vancouver, Wash., a firm which will import fancy veneers from the Philippines, Africa, Formosa and France and splice them for use by plywood manufacturers, has started production. The firm, which includes Treeco Sales Corp., Oswego, Ore., as a sales outlet, is headed by George Cassarno as president. Gene Gronenthal will manage the Vancouver plant.

AUTOMATION SAWMILL . . . Placerville Lumber Co., Placerville, Calif., has constructed a new sawmill at its Smith Flat location in which numerous automation features are included. It is a band operation and includes a gang, debarker and chipper. The mill is expected to cut 50,000 feet a shift of pine, fir and cedar with only five men on the mill floor.

NEW PLY PLANT IN NORTH CAROLINA . . . Albermarle Plywood, Inc., Edenton, N. C., is now in production. Tom Holden, formerly general manager of Lea Lumber Co., Inc., Windsor, N. C., is president of the hardwood plywood firm.

Personalities . . .

TEMPLE JR. NAMED TO SOUTHWEST BOARD . . . Arthur Temple, Jr., prominent east Texas lumberman, has been elected to the board of directors of Southwest Lumber Mills, Inc., Phoenix, Ariz., with plants at Flagstaff and McNary Ariz., and Corrigan, Tex. Temple is president of Southern Pine Lumber Co., Diboll, Tex., and is an executive or director of more than 30 other companies including firms in the field of lumber manufacturing and distribution.

ST. REGIS PICKS LEWIS . . . Sidney B. Lewis, president and general manager of Mount Jefferson Lumber Co., Lyons, Ore., from 1952 to 1957, has been named assistant to Benton R. Cancell, executive vice-president in charge of operations for St. Regis Paper Co. He will be responsible for development of a broad program of modernization of the company's lumber and plywood operations in the Puget Sound area of Washington.

EXECUTIVE CHANGES AT IVORY PINE . . . E. P. Ivory, president of Ivory Pine Co. for a number of years, has been elected to the newly created post of chairman of the board of directors. Gus Luellwitz, a major stockholder and long associated with the firm, becomes president. Grant B. Potter, general manager, is named to the new post of executive vice-president.

FORESTER GETS POST . . . Charles H. Lewis, formerly chief forester for the Crosby Chemical Co., DeRidder, La., is new executive director of the Louisiana Forestry Association. He succeeds James H. Kitchens, Jr., who joined the forestry department of the T. L. James Co., Ruston, La.

Are you looking for Filing Room Equipment for small saw blades?

VOLLMER

offers you the right machine for any requirement

Here are some of our models for the sharpening and setting of

circular saws
gang saws
band saws
hand saws

For complete information — write, wire or phone one of our distributors:

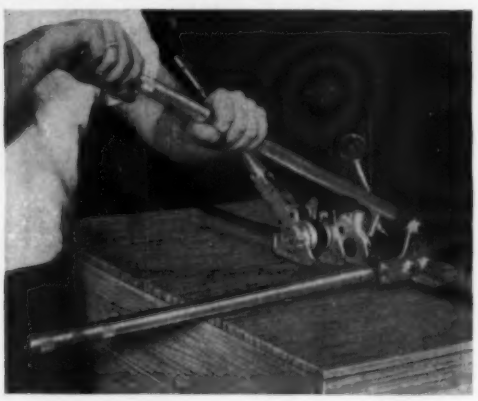
Corley Manufacturing Company, P. O. Box 471, Chattanooga 1, Tenn., Tel. MA 2-1161
Joseph Roediger & Co. Ltd., 22 Martin Road, Hamilton, Ont., Canada, Tel. LI. 5-6977 & LI. 9-9147
Max Sturm, Industrial Saws & Supplies, 1213 SO Hawthorne Blvd., Hawthorne, Calif. Tel. OSborne 5-3010
Colonial Saw Company, 679 E. Genesee Street, Buffalo 11, N. Y. Tel. MAdison 9248

USS Steel Strapping tools that supervise themselves . . .

correct tension every time — blindfolded!

How does he know when the correct tension has been reached? The 62 Stretcher tells him so—with a loud "click." In the handle of the stretcher is a set screw. The operator (or his supervisor) pre-sets it to the tension he wants, and from then on he just listens for the "click." There is no guesswork, no uncertainty, no difference in tension from strap to strap, no variation from operator to operator. The tension on your lumber packages is always exactly right, and every strap carries its fair share of the load.

Tying is faster, better. Packages are safer, stronger.



A perfect seal every time—automatically!

With the 67 Sealer, it is impossible to "half seal" or apply a "low efficiency" seal. Once you start the sealing motion, you *have* to carry it all the way through. The sealer cannot be removed until the perfect seal is made. So no supervision is necessary. You can't make a mistake with the 67 Sealer.

Sealed joints are 95% to 100% efficient, because the 67 Sealer makes an interlock seal joint. Thus the strapping is not cut or nicked. It retains practically all its tensile strength.

Tying costs less, too. Since the interlock seal does not weaken the strapping, it is often possible to use a narrower, lighter-weight, lower-cost strap than with a cut type sealer.

Put the USS "self supervising tools" to work for you. Do a faster, better job at lower cost. Return the coupon for full details.

USS is a registered trademark

Complete Strapping Service

•Strapping •Tools •Technical Assistance

U.S. Steel Supply Division
U.S. Steel Corporation
208 South LaSalle Street, Chicago 4, Illinois

Please send me further information about the 62 Stretcher and the 67 Sealer.

Name _____

Company _____

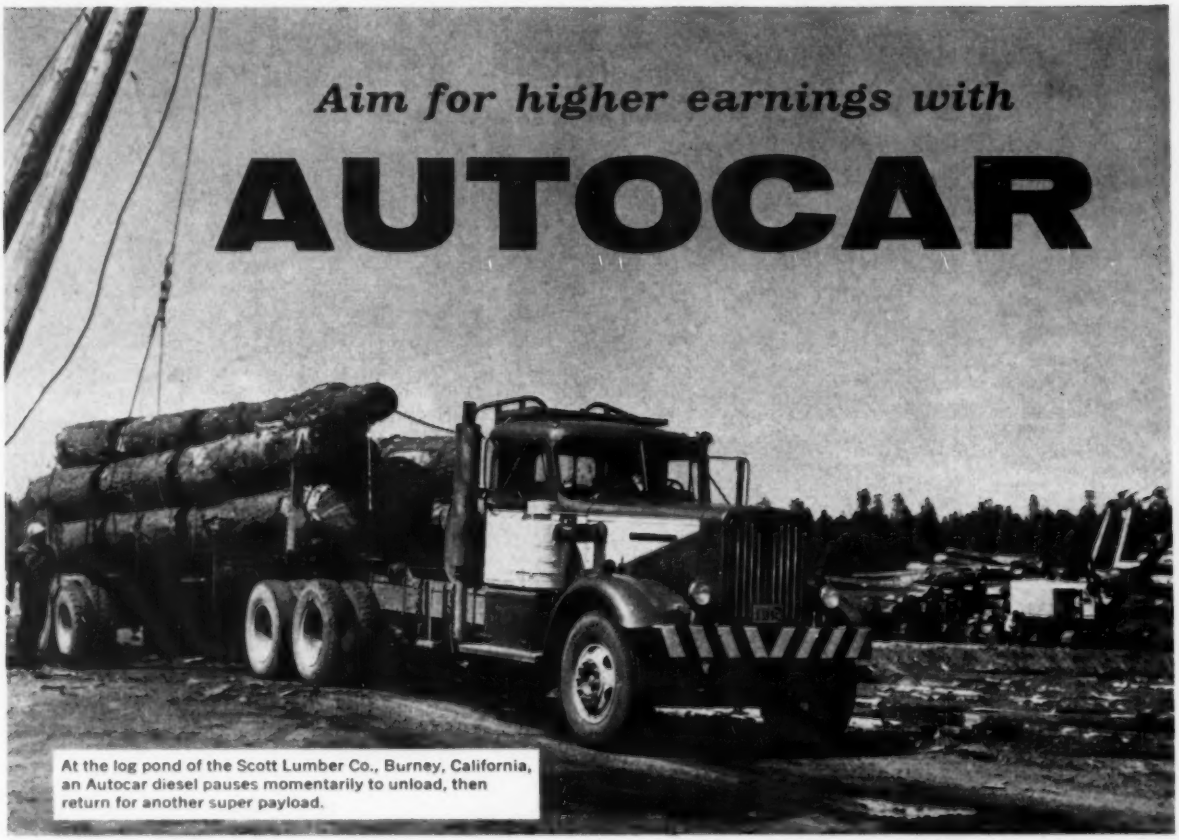
Address _____

City _____ **Zone** ____ **State** _____

U. S. Steel Supply Division of United States Steel

Steel Service Centers and
Complete Steel Strapping Service Coast to Coast
U. S. Steel Strapping formerly Gerrard Strapping

Unload your HAULING PROBLEMS



At the log pond of the Scott Lumber Co., Burney, California, an Autocar diesel pauses momentarily to unload, then return for another super payload.

...the forest industry's proved cost-saving diesel!

You hear the same story from timber and lumber haulers throughout the West: Autocar cuts hauling costs... Autocar consistently earns more! And there are sound reasons for these reports! Autocar was engineered to haul more board feet under the toughest terrain and weather conditions, year in, year out! Of course, you need the finest basic components for this kind of service, but even more necessary, you need Autocar plus quality features: nut and bolt construction for extra strength; balanced propeller shafts to prevent vibration and premature wear; inexpensive, replaceable bushings at major points of wear... in other words, *built-in extra earning power from end to end!* Call your local Autocar representative today... let him take your hauling problems off your hands and start you on the road to higher earnings now!

When you get down to factual comparisons your logical choice is . . .

Autocar
"World's Finest"

Division of
White Motor Company
Exton, Pa.

NEW EDITION ▲ YOUR COPY NOW READY

22 pages of basic, immediately useful figuring facts. Simply request complimentary copy on your business letterhead, addressing Friden, Inc., Dept. TL, San Leandro, California.

TABLE OF CONTENTS

THE PROBLEMS

LUMBER METHODS

Board Feet by Division
Board Feet by Multiplication
Wholesale Lumber Invoice
Mill Lumber Invoice
Wooden Box Invoices
Planing Mill Invoice
Invoice with Group and Line Discounts
Millwork Invoice (Split Clearance Feature)
Invoice with Group and Line Discounts (Split Clearance Feature)
Mill Costs per 1000 Board Feet (Reciprocal Method)
Mill Costs per 1000 Board Feet (By Division)
Mill Costs per 1000 Board Feet (Automatically Adjusted)
Board Feet Conversion Factors
Board Feet Conversion Divisors

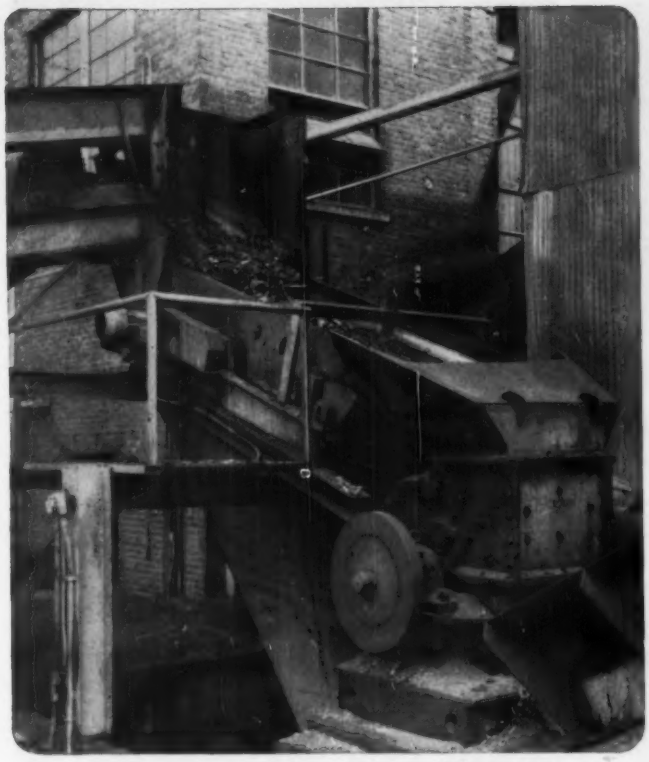
MISCELLANY

Measurement of Logs
Table for Computing Cubic Feet in Logs
Quarters, Plywood, Board Feet in Railroad Ties

At your convenience, also, you're invited to watch a demonstration of the fully automatic Friden Calculator—*The Thinking Machine of American Business.* When you do this, ask especially to see mechanized calculations on tally sheets, cost figuring, payroll and invoicing.

Friden *has the system*

Automatic office operation is the Friden function—Call your Friden Man or write Friden, Inc., San Leandro, California . . . instruction, sales and service throughout U. S. and the world.



Type A Shredder reduces oversize chips and bark.

Large Wood Hog shreds bark and broken pulp logs.

JEFFREY SHREDDERS

for making hard board, chip core and chip board ...reducing oversize chips, bark and wood waste

Jeffrey Shredders can produce an ideal chip for making hard board and chip core. Our machines can be equipped with specially designed internal parts for this lucrative application. Many producers are already turning lumber waste to profit. Write today—we'll tell you how Jeffrey Shredders play a part in the manufacture of this new building material.

Other popular shredder uses:

Pulpwood plants: oversize dry or green wood chips, caught by the screen as they come from the Chipper, are reduced by a Jeffrey Re-chipper in one operation, to a size suitable for digesters.

Bark and broken pieces of pulpwood, taken from the barking drums, are reduced to proper size for boiler fuel by Jeffrey Shredders.

Furniture factories: wherever furniture or other hard wood products are manufactured, the waste can be processed in Jeffrey Wood Hogs to supply fuel for plant boilers.

Other manufacturing: to shred hogged pine stumps to a fine product for extraction of turpentine, rosins and related chemicals. To reduce waste paperboard for re-use in making paperboard or insulation. To break bales of Kraft sheets, groundwood lap or sheets and other materials.

Remember, Jeffrey Swing Hammer Shredders and Wood Hogs have no knives that need sharpening. Wood is torn or shredded, never ground, resulting in a superior product.

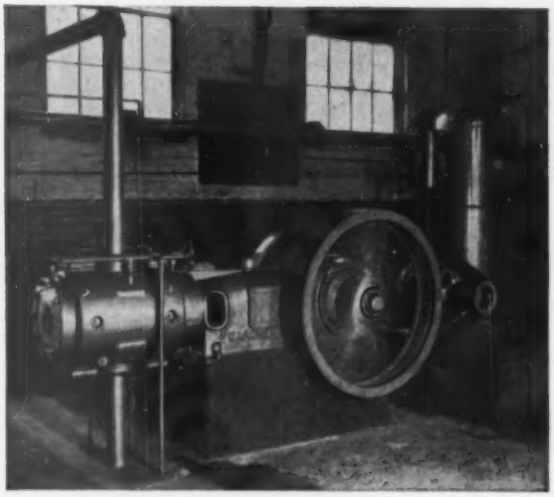
Write for Catalog No. 855. The Jeffrey Manufacturing Co., Columbus 16, Ohio.

JEFFREY

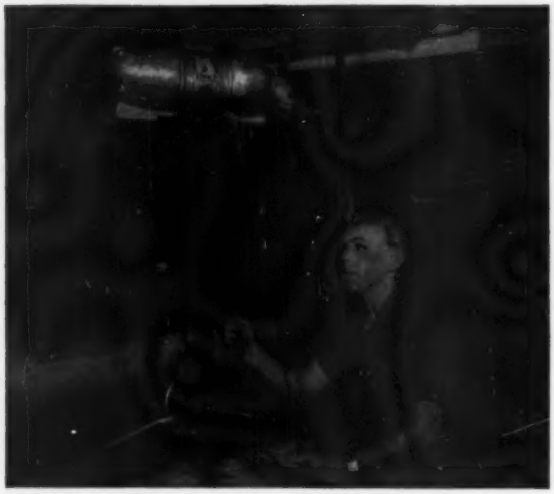
CONVEYING • PROCESSING • MINING EQUIPMENT • TRANSMISSION MACHINERY • CONTRACT MANUFACTURING

A space-saving package ready to hook up—the Gardner-Denver WB compressor. Self-contained radiator-intercooler eliminates cooling water problems. Available in eight sizes.

Safe, dependable power for a wide variety of applications from Gardner-Denver air motors. Five-cylinder radial design. Choice of models that range from 3 to 15 horsepower.



For continuous operation at low power cost, it's Gardner-Denver RX compressors. Parts easy to inspect and adjust. Sizes: 100 to 1410 cfm. for pressures from 15 to 150 psi.



Lift 50- to 4000-pound loads easily with Gardner-Denver air hoists. They provide a swift, steady lift with gentle starts and safe, accurate stops, for operations like loading logs.

Harness air power to your mill with a Gardner-Denver team

Put air to work in your mill and you have power exactly where you need it—when you need it. Here's versatile power that's convenient, economical, easily controlled and—above all—safe.

Any one or any combination of the Gardner-Denver air team shown above helps harness air power to exactly fit your needs. For complete information, write for descriptive bulletins.

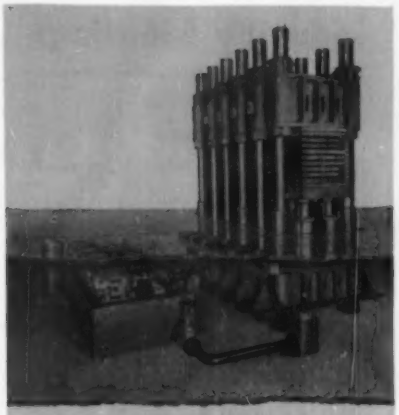
EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

GARDNER - DENVER

Gardner-Denver Company, Quincy, Illinois

In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

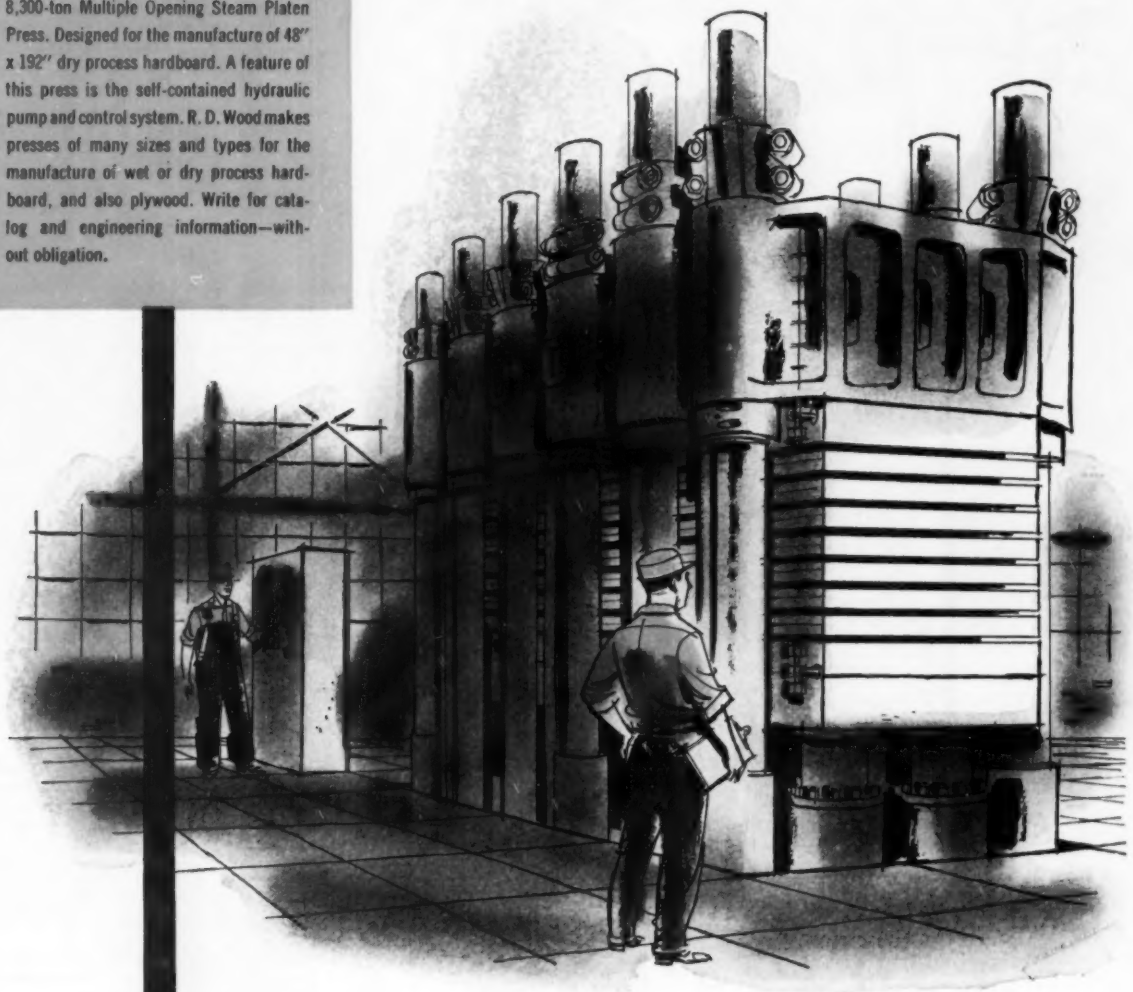
Branch Offices: Seattle, Vancouver, San Francisco, Los Angeles, Salt Lake City, Denver and Wallace, Idaho



8,300-ton Multiple Opening Steam Platen Press. Designed for the manufacture of 48" x 192" dry process hardboard. A feature of this press is the self-contained hydraulic pump and control system. R. D. Wood makes presses of many sizes and types for the manufacture of wet or dry process hardboard, and also plywood. Write for catalog and engineering information—without obligation.

You'll like what it does to production

It's just plain common sense—when your down-time decreases your production is bound to increase. Down-time can't be eliminated, but R. D. Wood Presses hold it to a minimum. The sound design, choice materials and careful craftsmanship that go into a Wood Press produce a superior product—a dependable, smooth-working press that can't help but increase production records. Write for our catalog and engineering information—no obligation.



R. D. WOOD COMPANY

PUBLIC LEDGER BUILDING • PHILADELPHIA 5, PENNSYLVANIA

Log-handling is cheaper by the load

This 60-foot span crane was "job-engineered" by EDERER for service at a paper mill. It moves logs from the pond or unloads from trucks or cars to the log deck . . . handles full loads at one lift—up to the crane's 50-ton capacity. This faster, smoother log-handling saves time and money.

The crane has double drum fixed hoist and spreader bar. The bridge moves from pond, over tracks and to log deck. Hoist and controls are completely housed for service in any kind of weather.

Inquire about our complete line of light duty cranes from 3- to 20-ton capacity.

EDERER "job-engineers" equipment for the forest products industries for many such specialized uses. Why not discuss YOUR special job requirements with an EDERER engineer?

EDERER Cranes

344C59

EDERER ENGINEERING COMPANY
2933 FIRST AVENUE SOUTH • SEATTLE 4, WASHINGTON
EXPORT DIVISION: 301 Clay Street, San Francisco 11, California

Since 190— "JOB-ENGINEERING" CRANES AND HEAVY EQUIPMENT

Industry Meetings

SEPTEMBER

Louisiana Forestry Association, September 10-11, Alexandria, La.

Wood Industries Conference, September 10-12, Multnomah Hotel, Portland, Ore., sponsored by American Society of Mechanical Engineers, American Institute of Chemical Engineers and Forest Products Research Society.

Concatenated Order of Hoo Hoo, September 13-16, Duluth Hotel, Duluth, Minn.

California Redwood Association, September 14, San Francisco, Calif.

Lake States Logging Congress, September 17-19, Iron Mountain, Wis.

Northern Hemlock and Hardwood Association Manufacturers' Association, September 22-23, King's Gateway Hotel, Land O'Lakes, Wis.

Western Pine Association, semi-annual, September 23-25, Multnomah Hotel, Portland, Ore.

Paul Bunyan Forestry Exposition, Ohio Forestry Association, September 23-24, New Lexington, Ohio.

Northwest Hardwood Association, annual, September 25-26, Monticello Hotel, Longview, Wash.

OCTOBER

National Hardwood Lumber Association, October 6-8, Queen Elizabeth Hotel, Montreal, Canada.

Canadian Institute of Forestry, October 6-9, Prince George, B. C., Canada.

Forest Products Research Society, Northern California section, October 9, Santa Rosa, Calif.

Yale University Industrial Forestry Seminar, October 12-23, Longview, Wash.

50th Anniversary, University of Idaho, October 22-24, Moscow, Ida.

NOVEMBER

Hardwood Association, fall meeting, November 5-6, Chicago, Ill.

National Lumber Manufacturers Association, annual, November 9-12, Statler Hotel, Washington, D. C.

National Wood Council, November 9, Statler Hotel, Washington, D. C.

Pacific Logging Congress, November 11-15, Civic Auditorium, Seattle, Wash.

Forest Genetics Meeting, November 13-14, Institute of Forest Genetics, Placerville, Calif., joint session of Western Forestry Genetics Association and Society of American Foresters committee on genetics.

American Forest Products Industries, annual, November 13-16, LaSalle Hotel, Chicago, Ill.

Society of American Foresters, annual, November 15-18, Sheraton-Palace Hotel, San Francisco, Calif.

Southern Sash & Door Jobbers, winter meeting, November 16-18, Shamrock Hotel, Houston, Texas.

DECEMBER

Red Cedar Shingle Bureau, December 4, Olympic Hotel, Seattle, Wash.

National Oak Flooring Manufacturers Association, annual membership, December 9-10, Hotel Peabody, Memphis, Tenn.

Western Forestry & Conservation Association, December 9-11, Spokane, Wash.

Borden

plywood adhesives service is only a phone call away

Wherever you are in the West, get service *fast* when you phone your nearest Borden representative for adhesives. Tank car, tank truck, or drums of resin are available on short notice, serviced by experienced men located near *you* for *your* convenience.

This quick and handy service is backed by Borden's 25 years of manufacturing knowledge in "tailoring" adhesives to fit your needs.

Phone your nearest Borden representative or write The Borden Chemical Company, 6010 Airport Way, Seattle 8, Washington.

IF IT'S A *Borden* *Chemical*

IT'S GOT TO BE GOOD

SEATTLE, WASH.
PArkway 2 3700

SPOKANE, WASH.
RIverside 7 7355

TACOMA, WASH.
FUlton 3 4293

SPRINGFIELD, ORE.
RIverside 7 3343

GRANTS PASS, ORE.
GReenwood 9 1088

REEDSPORT, ORE.
CRestview 1 2953

PORTLAND, ORE.
NEptune 6 5860

EUREKA, CALIF.
HIllside 2 1210

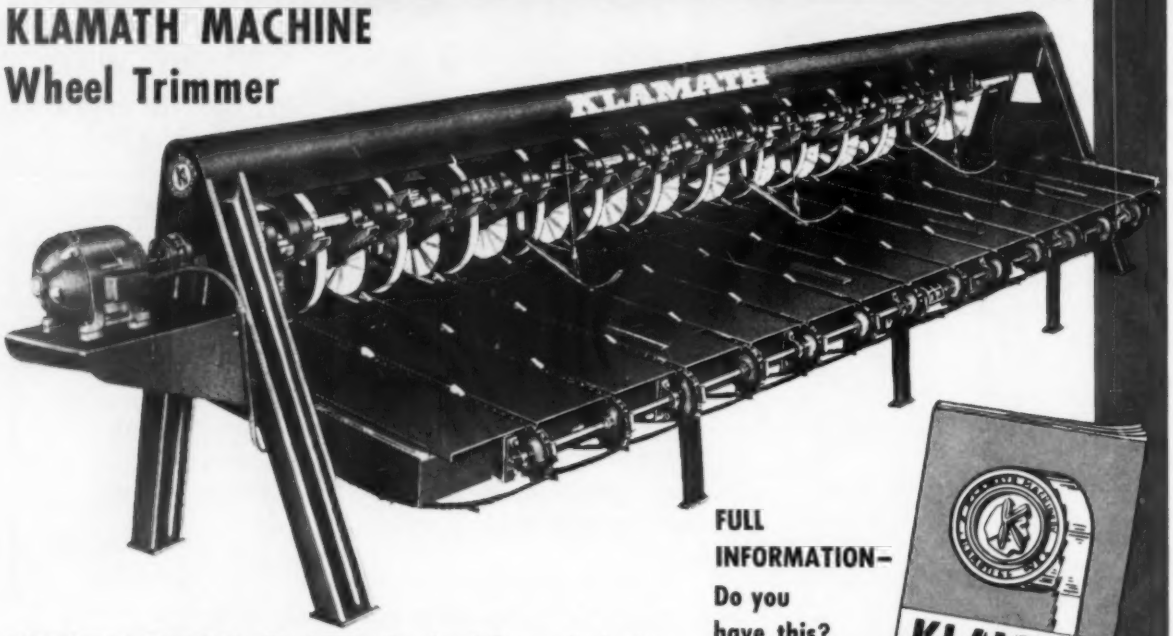
SAN FRANCISCO, CALIF.
VAlencia 6 5070

LOS ANGELES, CALIF.
NEvada 6 1337

L-99

NO twist
NO vibration
NO bounce

KLAMATH MACHINE
Wheel Trimmer



IMPORTANT FEATURES—Steel Tube Overhead Beam eliminates twist and vibration.

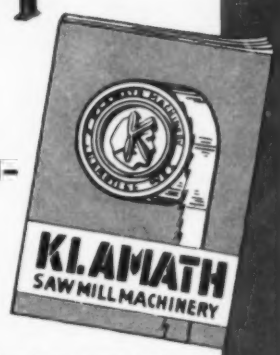
Electric or Air Operated Latching Pawls eliminate troublesome wire cable controls.

Sawing Units constructed almost entirely of cast magnesium to gain maximum strength with minimum weight.

Special Heavy-duty Rubber Encased Springs reduce bounce after board passes under sawing unit.

This construction is also available in sawmill-type, cylinder operated Trimmers.

FULL INFORMATION—Do you have this?



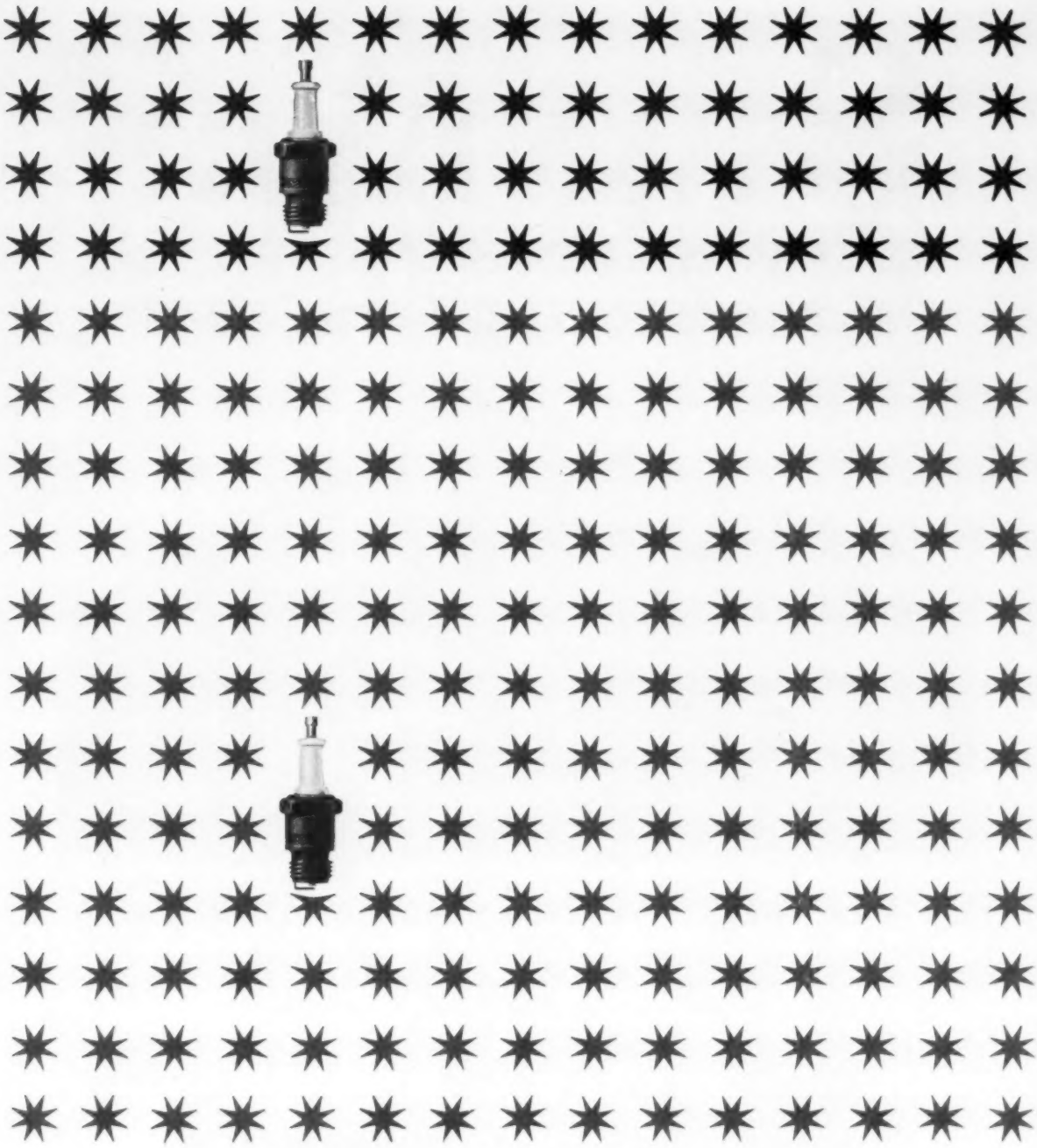
The Automatic Random Length Wheel Trimmer is described in detail in our *new* CATALOG. A copy—which illustrates and describes our full line of Sawmill Machinery—will be sent to responsible sawmill operators. Ask for a copy of this *new and carefully prepared* CATALOG.

KLAMATH MACHINE & LOCOMOTIVE WORKS INC.

P. O. BOX 208 • KLAMATH FALLS, OREGON, U. S. A.

Look for the Indian Head on all **KLAMATH MACHINE** *products*

Export Division: FRAZAR & HANSEN, Ltd., 301 Clay Street, San Francisco 11, California, U.S.A.



WITH MOBILGAS R SPARK PLUGS LAST UP TO THREE TIMES LONGER

The phosphorus additive in Mobilgas R gives heavy and light-duty trucks up to 300% more spark plug life. Phosphorus is just one of the six different additives in Mobilgas R. No other *regular gasoline* has such complete additive strength.

YOU BENEFIT DIRECTLY WITH:

- *Longer Spark Plug Life*
- *Less Down Time*
- *Power Carburetor Boil Outs*
- *Longer Piston Life*
- *Powerful, Thrifty Performance*
- *Fewer Repairs And Overhauls*

Mobil

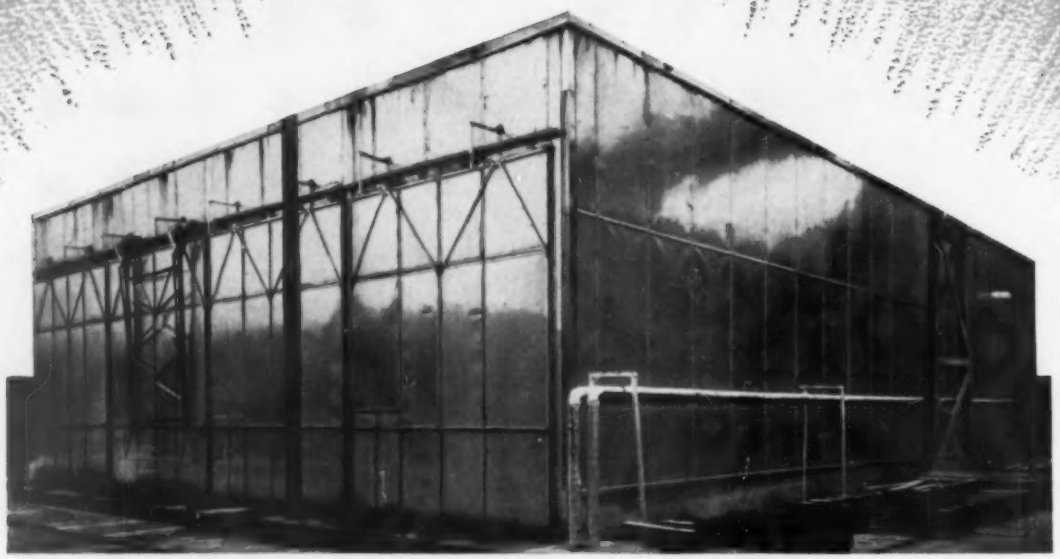
MOBILGAS R MAKES THE DIFFERENCE

General Petroleum Corporation • 612 So. Flower Street • Los Angeles, California

2-265

SERVING THE WEST WITH MOBILGAS—MOBILFUEL DIESEL—MOBIL LUBRICANTS

STANDARD
DRY KILNS NOW IN WESTERN STATES



with SALES • SERVICE • MANUFACTURING

After successful installations in two MacMillan & Bloedel Ltd. plants and repeat orders for six additional kilns, Standard now has full representation in the Western States. Here is the Kiln that has delivered PROVEN RESULTS under the toughest conditions:

FIRST! in Direct Driven Motor and Fan Units Inside Kiln, Eliminating Line Shafts and/or Gear Drives

FIRST! in Aluminum Insulated, Prefabricated Kiln Buildings

FIRST! In Design Based on Over 70 Years of Sound Engineering Principles!

Before you buy or rebuild any kiln, check on STANDARD DRY KILNS

Contact IRVINGTON MACHINE WORKS, 1808 N. E. 7th Avenue, Portland 12, Oregon—Atlantic 4-1187

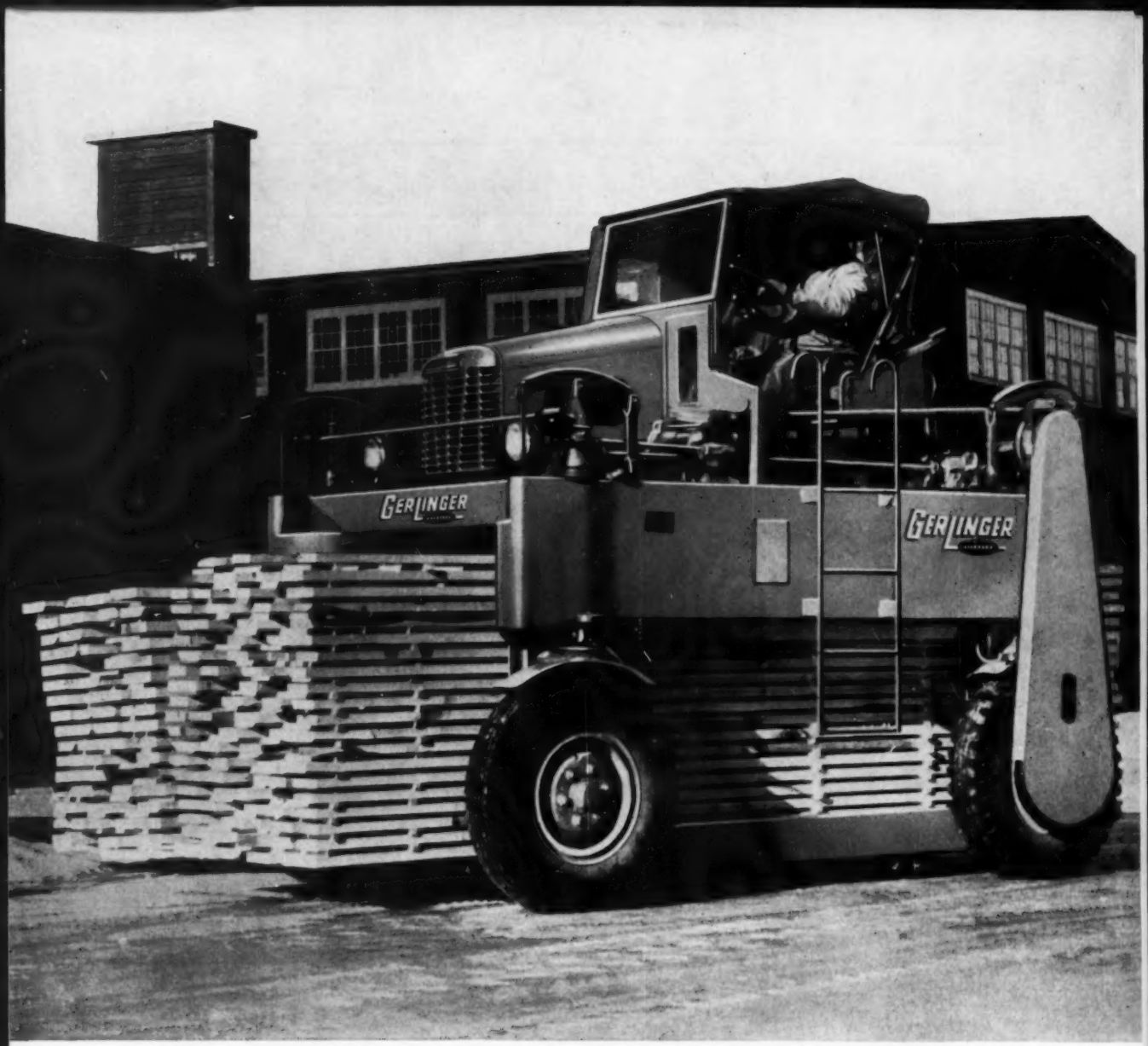
Irvington MACHINE WORKS

Manufacturers of Internal Fan Kilns

STANDARD DRY KILN COMPANY

Engineers and Manufacturers Since 1887

In Arizona and New Mexico, contact Patterson Sales Company, 618 E. Yandell St., El Paso, Texas



Special delivery every time...

. . . with extra profit per payload! Gerlinger Material Carriers move massive loads *without lost motion* in yard, en route and at distant delivery points.

A "one-man crew" does everything. Loads in seconds. Hauls many tons at safe highway speeds. Delivers bulky lumber, millwork or pallets of building materials *direct to customer* miles away. No other equipment is needed.

See the cost-saving statistics reported by Gerlinger *Job-Proved* Carrier users. Ask for Certified Job Studies Nos. G-103 and G-104—and new Gerlinger Specification Folder *GMC*. Write Towmotor Corporation, Cleveland 10, Ohio or Gerlinger Carrier Company, Dallas, Oregon.*

TOWMOTOR ® **-GERLINGER** LEADERS FOR 40 YEARS IN BUILDING FORK LIFT TRUCKS, CARRIERS AND TRACTORS

THE ONE-MAN-GANG

*Gerlinger Carrier Co. is a subsidiary of Towmotor Corporation

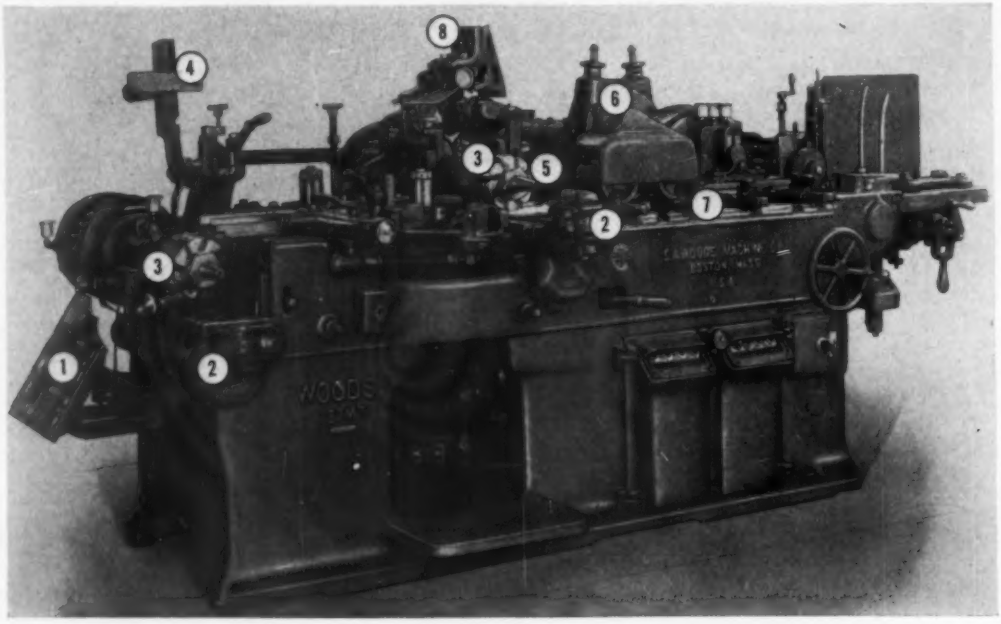
Serving the Industry Since 1852

WOODS® 137 MOULDER

the *ONLY* Moulder with "*Finger Tip*" Accessibility

1. Feed-out table dropped giving full accessibility for knife set-up and jointing. Table is furnished with counter balance spring.
2. Outboard bearings removed from spindles and dropped into position to allow easy replacement of top and bottom spindles.
3. Showing complete cutter heads assembled on tapered spindles.
4. Pressure bar with hold down shoe swung up out of position leaving entire top of working area clear for set up.
5. Spindle with tapered end for positive self-centering and mounting of Outboard bearing.
6. Direct roll pressure provided by individual adjustable calibrated springs.
7. Individual spring yielding adjustable front spring guides.
8. Top head chip breaker with adjustable sectional shoes and equipped with yielding spring fingers. Swung up out of position for full accessibility of top head.

Simple fool proof hold downs, guides and adjustments conveniently located for operator.



S. A. WOODS MACHINE CO.®
27 DAMRELL STREET
BOSTON 27, MASS.

Trust your AIM*... Moser Lumber Co. did...

Acme Steel Strapping speeds lumber handling

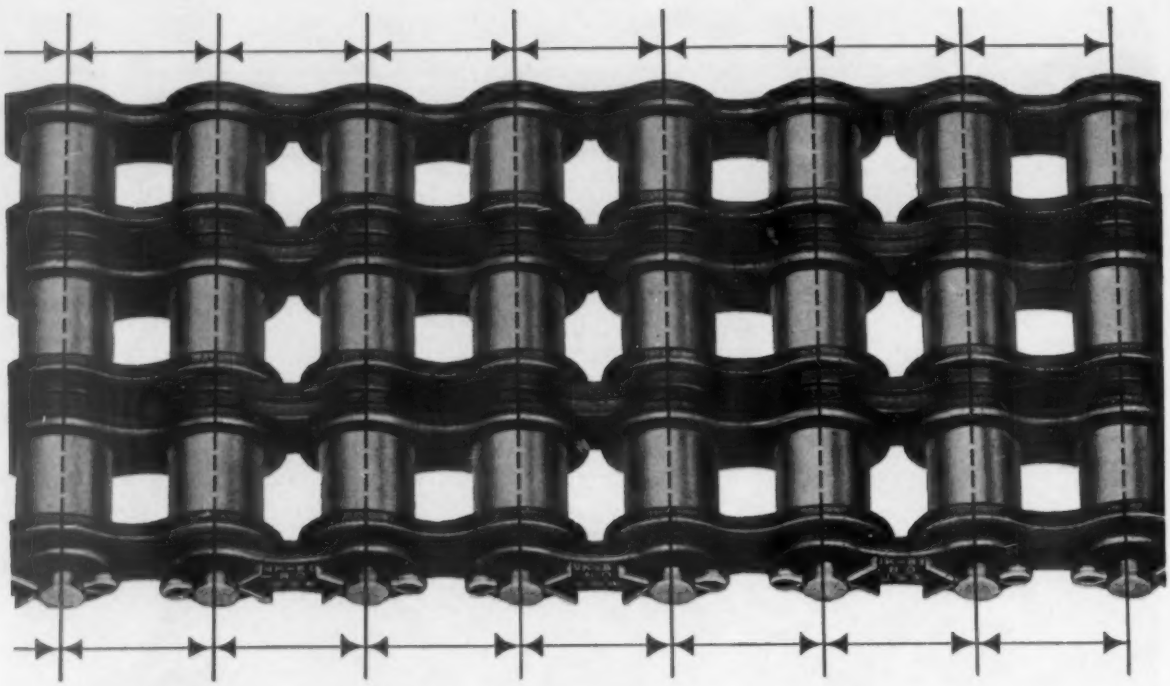
Acme Idea Man, Bill Saari helps many companies to better, faster packaging and product handling.

MOSER LUMBER COMPANY, NAPERVILLE, ILLINOIS, with the help of an Acme Steel Strapping Idea, has achieved a much faster way to deliver lumber to local home builders. (Idea No. U5-4)

Strapped lumber packages are loaded by lift truck in a matter of minutes at the yard, and unloaded at the building site in 5 minutes with the use of roll-off trucks. Formerly all this was done by hand. Heavy-duty Acme Steel Strapping allows larger truck loads and keeps lumber secure and protected during transit and after unloading. Now each truck makes double the number of trips per working day. Another example of time and manpower being used to the best advantage through the application of Acme Ideas.

***Trust your Acme Idea Man.** His experience qualifies him to discuss your packing and shipping problems. Write Dept. LBU-99, Acme Steel Products Division, Acme Steel Company, 1025 Sixth Avenue South, Seattle 4, Washington. Also Portland, Oregon.

ACME STEEL **STEEL STRAPPING**



Equal length... equal strength

How pre-stressing ensures uniform load distribution of multiple-width LINK-BELT roller chain

Pre-stressing is one of the reasons why Link-Belt multiple-width precision steel roller chains easily handle the grueling loads common on today's drives. It seats and cold works the chain joint parts, assuring equal load distribution across the chain, minimum initial elongation, increased fatigue life.

Pre-stressing is just one of many "extras" that contribute to the *greater dynamic strength* of Link-Belt roller chain. Others include: close heat-treat control, lock-type bushings, shot-peened rollers, pitch-hole preparation. For details see Book 2657.

PRE-STRESSING MACHINE provides the pull that "sets" the parts of Link-Belt multiple-width roller chain. Besides assuring uniform load distribution, pre-stressing eliminates application difficulties on fixed center drives because the chain leaves the factory at precise operational length.

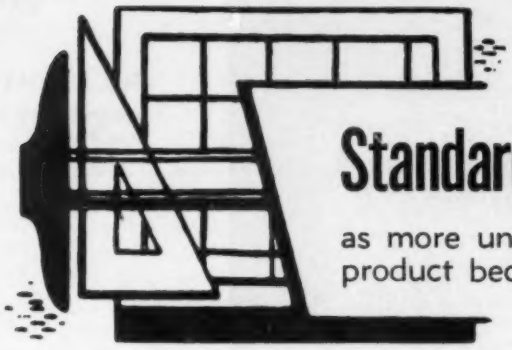
LINK-BELT

ROLLER CHAINS AND SPROCKETS

BOOK 2657 has 154 pages of roller chain data. Contact your nearest Link-Belt office or authorized stock-carrying distributor. (See CHAINS in the yellow pages of your phone book.)

15,077

LINK-BELT COMPANY: To Serve Industry There Are Link-Belt Plants, Sales Offices and Factory Branch Stores at San Francisco 24, Los Angeles 22 (Montebello), Seattle 4. Sales Offices and Factory Branch Stores at Portland 10, Spokane 10, Salt Lake City 1. Stock Carrying Distributors in Principal Areas.



Standards You Face

as more uniformity of plant and product becomes essential

Two types of standards are moving in on the forest products industry. They are not difficult to recognize.

One concerns the basic lumber manufacturing plant. The other has to do with the products turned out by the same plant. Board plants are closer to standardization, plywood plants are approaching it. Laggard has been the sawmill.

Closer uniformity of the mills will permit more rapid development of systems, controls, material handling and basic equipment. Rather than having a repressing effect, the more uniformity in plant designs, the more the equipment manufacturer will be justified in investing in longer range research to develop and improve equipment, with the larger markets in view. He will not have to tailor-make equipment for each mill and then perform the costly re-engineering job for the next mill down the road. Controls and mechanical aids used by many industries can then be more readily applied to sawmill needs.

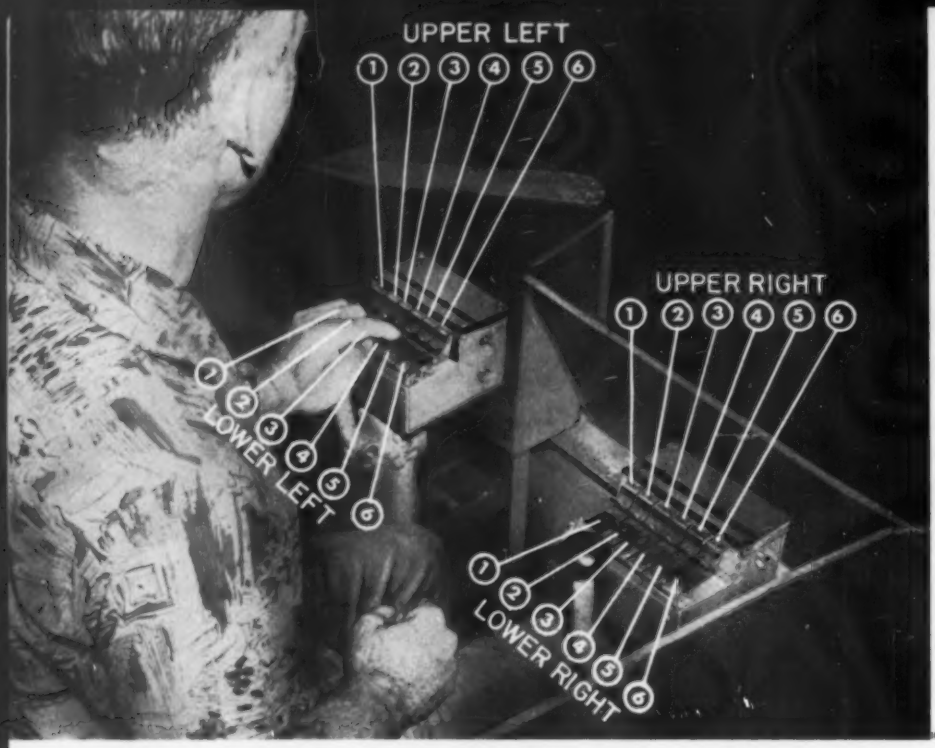
Standardization of mills is being applied in two ways. One is the "package section." This may include the complete head end: Deck, headrig, carriage and roll cases with concentrated control equipment. It can be the edger and trimmer and transfer systems with central controls, or the new ideas now being advanced for complete automatic sorting systems. Packaged sections are being applied to the modernizing of older mills as well as new. The other application is in the form of a complete "turn-key" job whereby a complete plant including the building is contracted at a single price and turned over to the owners ready to operate.

The plant design engineer, whether a consultant or associated with an equipment manufacturer, is now recognized as essential in planning and layout of mills. The old time millwright- and superintendent-built plant is passing from the picture as being too costly. Newer mills are being engineered to include plans for probable expansion, thus eliminating future needs for costly revamping. Though plants and flow plans will continue to vary according to circumstances, species and log sizes, the engineered plant is designed to utilize standard equipment specifications and applications. Results are a more efficient plant, less maintenance, easy replacement, reduced operating and overhead costs and better profit realization.

The second standard is the rapid movement toward a more uniform product. With the lumber industry, the architect and builder endeavoring to reduce "in-place" costs of construction, building methods are fast changing to include the concept of component and prefab units. Such units are readily adaptable to architectural design and builder's needs. The component concept is based on greater product standardization of sizes, accuracy, moisture content and general product quality. It traces directly back to the basic manufacturer.

If competitive market demands can be met, the industry will prosper. If they cannot, competitive product manufacturers who are putting on more and more pressure for those same markets, and are willing to meet market demands, will move in.

Many mechanical aids, new developments and application in mills are described in this issue. They illustrate how rapidly electronics are moving into the wood manufacturing fields to meet the pressures of reducing production costs and necessity of meeting market demands. Here are many examples of how millions of dollars are being invested on more uniformity to take advantage of mechanical aids during the years ahead in the forest products industries.



Finger Tip

By E. P. IVORY
Chairman of the Board
Ivory Pine Co.

These are the controls used by the sawyer. Note that they are in a box mounted on top of the carriage feed lever on the left hand and the log loader and turner lever on the right. In addition to the two major operations, 39 functions are performed by fingertip touch as follows:

Left hand, upper row

1 Power to carriage motors: Start—pull; stop—push.
2 Signal horn to call: Edgerman—pull; millwright—push.
3 Variable additional thickness gauge for heavy logs. For extra thickness 1/32 to 1/7 inch—pull. Return to normal —push.
4 Move saw guide: To lower—pull; to raise—push.
5 Operate all three taper levers together: Forward—pull; reverse—push.
6 Operate all knees wide open: Forward—pull; reverse—push.

Left hand, lower flat row

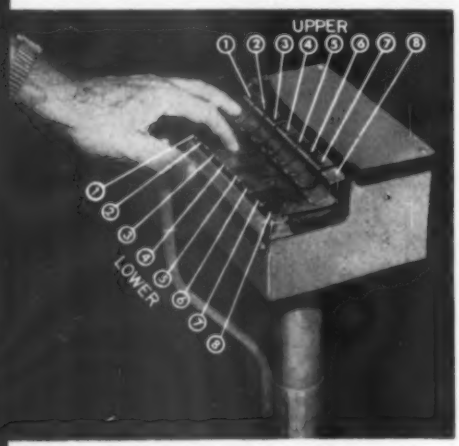
1 Blow chunks off plates or knees: touch and hold as needed.
2 Touch for 8/4 set out.
3 7/4 set out.
4 6/4 set out.
5 5/4 set out.
6 4/4 set out.

Right hand, upper push-pull keys

1 Oscillation of the tong dogs: Forward—pull; reverse—push.
2 Operation of hook in Simonson type log loader. Any position can be reached and held.
3 Two speeds for log loader: Slow—pull; fast—push.
4 Front knee taper lever control: Taper out—pull; taper reverse—push.
5 Center knee taper, same as 4.
6 Back knee taper.

Right hand, lower flat keys

1 Operate flipper on carriage.
2 Operate jump skids on live deck.
3 Operate board dogs on carriage through notching relay: First touch—on; second touch—off.
4 Operate tong dog on carriage, notching: First touch—squeeze; second touch—open.
5 Change over from small to large log loader, notching.
6 Live deck operating motor, on and off.



Piano key controls for edger are mounted on the edger feed lever, which gives infinitely variable speed forward or reverse. This set of key controls serves 23 functions.

Upper bank of push-pull switch levers

1 Shift left hand No. 1 saw: movement right—pull; move left—push.
2 Shift No. 2 saw: same as No. 1.
3 Shift No. 3 saw.
4 Shift No. 4 saw.
5 Shift No. 5 saw.
6 Feed table hydraulic motor control: Forward—push; backward—pull.
7 Straighten cants on rollcase—pull; raise or lower cant stop—push.
8 Reserve key.

Lower bank of flat momentary switch keys

1 Oiler for saw mandrel.
2 Lift pressure rolls.
3 Lift safety fingers to return board.
4 Raise pineapple against flitch.
5 Raise first section of transfer, chains, near roll case.
6 Raise second sections of chains, at edger lumber stop, notching.
7 Throw chunks off live rolls back of sawdust chain of band mill.
8 Reserve key.

Control Makes the Job Easier at automated California mill.

The system is easy to understand and simple to operate. It has resulted in greater production of a higher quality product.

A dominant principle of automation at Ivory Pine Co., Dinuba, Calif., is "make the work easier and improve its quality."

This is carried into the operator's switch panel and has resulted in the development of light finger tip controls to which, because of their construction and lightness, the name "Piano Key Controls" has been applied.

Built in Ivory's shop, the keys are of stainless steel strip, ¾" wide, hinged at one end and, in case of the push-pull type, bent to a functional pattern. All the switches within the boxes are of the micro type. They function with as little as 1/32" movement of the control points and usually have light spring returns with rubber covered dust caps.

There are two broad key types, one bent for push-pull manipulation where positioning is variable as in setting edger saws. When turned loose, they return to a neutral position. They are sometimes used for "monentary" contacts and often have different functions in the two operating positions.

Straight contact keys are customarily of the "momentary" type. That is, they make contact while held down and break on release. Sometimes they are of a straight contacting type which start or stop a motor or a cylinder through a relay. Frequently they are connected to a notching relay for sequences such as "start" and "stop," "open" or "close," "forward" or "reverse." Sequences up to six are feasible but usually only two are used.

Piano key switches are customarily attached to an operating relay rather than direct to the solenoid of the valves or to motors. This arrangement has been found to be more trouble free and more easily repaired if trouble develops. The use of coupling strips rather than fused connections is practiced. All wires are plainly numbered from finger switch to ultimate contact. Multiple wire cables are used and about 10% more switches and wires than are in use are provided. This permits quick change over in case of a short or break and the addition of functions.

Extra wires and coupling strips make for quick change over if a wire breaks or shorts out. Warning lights on the boxes are a great help in locating trouble or preventing damage as in the case of a projecting tong dog.

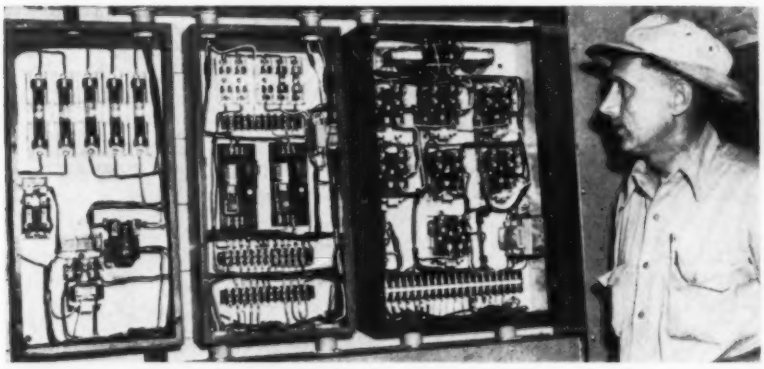
Placing the sawyer's hands in a horizontal rather than the vertical position usually encountered, even in most riderless carriages, was studied carefully. The company has found that this hand positioning permits many more functions because all four fingers in each hand are ready for immediate use. It considers the description of a man as "all thumbs" quite literally and has replaced it with "all fingers." Besides, with the new concept, the sawyer need not take his hand from his "stick" on either side. He retains his "feel" for each key and need not look away from his work. Men who have been heavy handed become like typewriter operators in a few days.

A knob is provided for the palm of the hand and stick motion is not only made light but reduced to a short arc through use of servo-mechanisms like a steering booster or "slave" valve. The movement of the carriage feed lever is only four inches, two inches each way from center. The log loading lever has about the same length stroke and returns to neutral of its own accord.

There are no pre-setting switches used or required in setting with this system. When the sawyer touches a 4/4 or 6/4 key he gets just that—and instantly. This is not only light on touch and without need for a look but actually requires less operations.

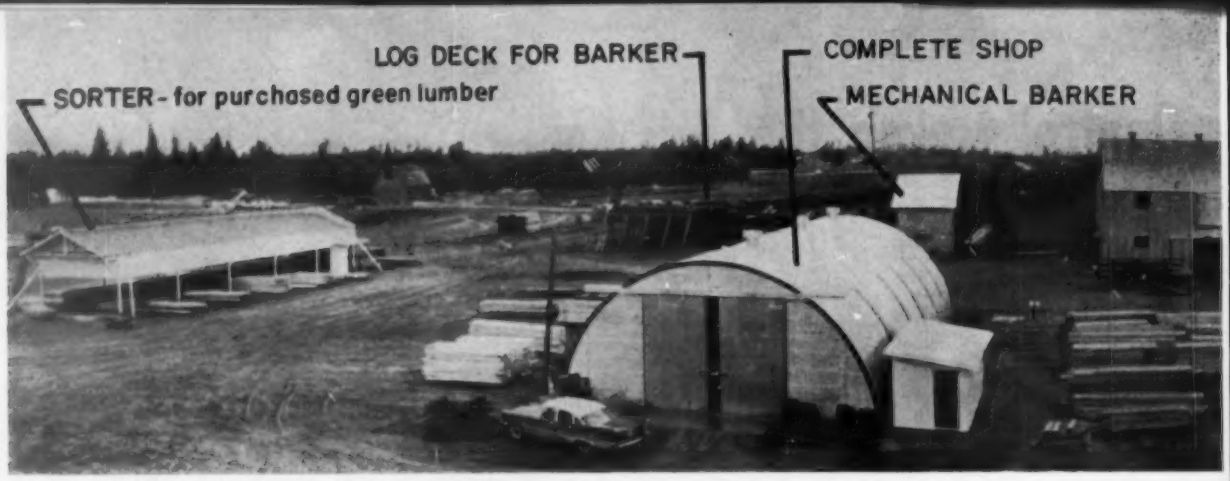
Consider a 12" pine cant from which there is cut in rotation 3 pieces of 4/4, 2 pieces of 6/4, one 8/4, 2 more 4/4 and a backstand. With pre-set system there would be four changes of the pre-set buttons and eight thumb contacts, a total of twelve. With the "piano key" control panel, as used at Ivory Pine Company, there are eight light finger tip contacts only, all without taking the hands from a stick or looking away from the carriage.

Following its original premise that light work makes for less fatigue and more thinking, the Ivory Pine Co. finds that the health of its operators shows less strain than formerly and that production has increased while quality has improved.



One set of relay and fuse boxes is used on carriage operations only. Note notching relays in center panel and liberal use of coupling strips. All wires are numbered and the same numbers follow through all coupling joints, sometimes as many as seven from the keyboard to operating point.

Operating keyboard for the trimmer table. Keys on this box are in three banks like a pipe organ. A diagram on the top denotes each function.



The "Trend" Sawmill reduces manpower requirements, simplifies operation with latest developments in power supply and control mechanisms

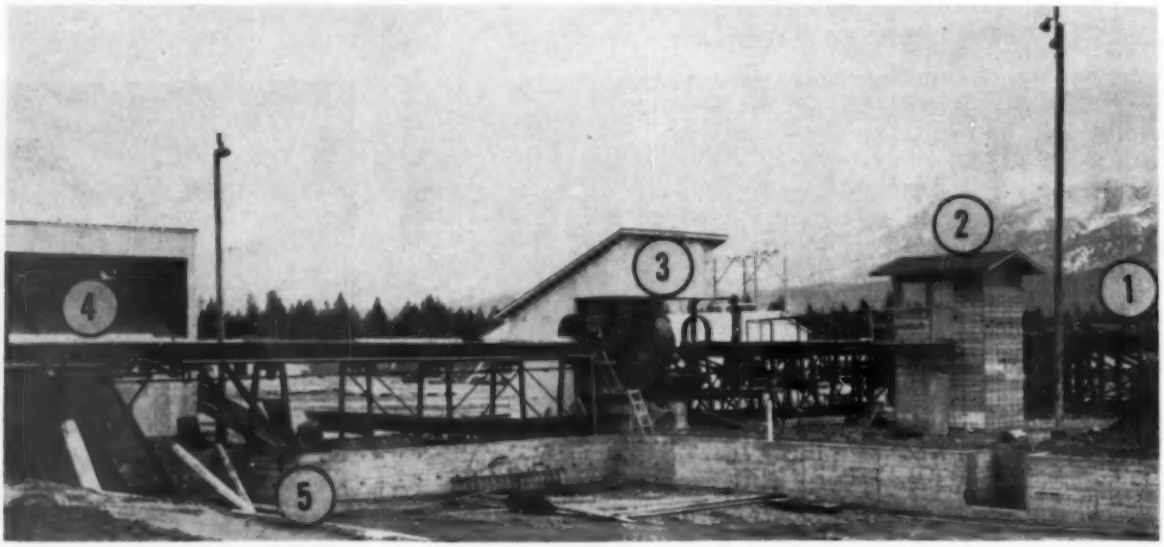
Combining the best features of conventional sawmill machinery with the newest ideas in mill design, yard layout and electrical engineering, the new Plum Creek Lumber Co., Pablo, Mont., illustrates a trend in mechanized aids, including chipper and barker.

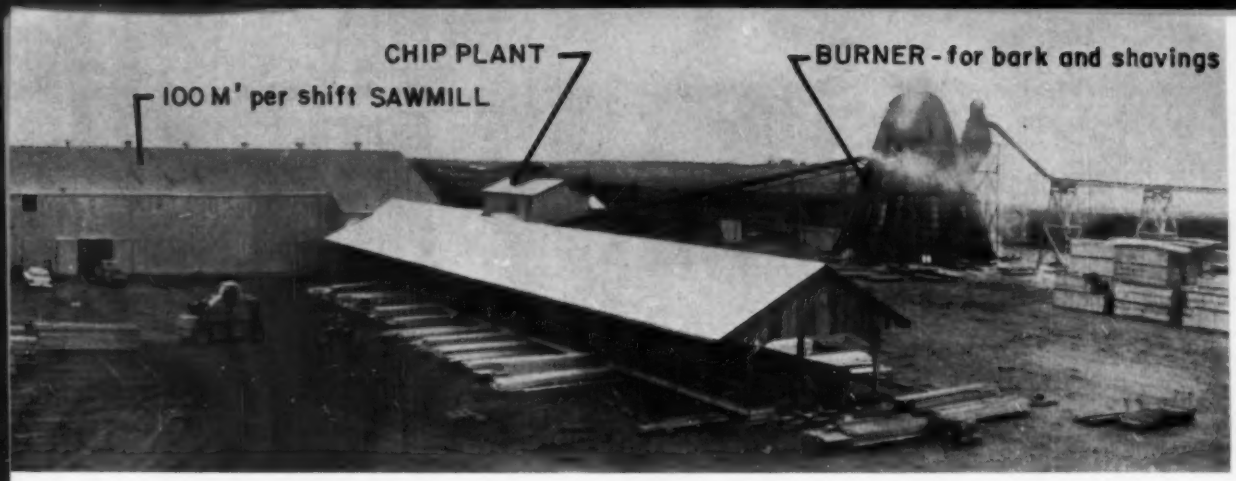
Lumber manufacturers will find many items of special interest here. The mill cuts in excess of 100 M bd. ft. per shift from Douglas fir, Engelmann spruce, white fir, ponderosa and white pine. While the basic sawmill layout and lumber flow are conventional, nearly every separate piece of equipment in the mill has been improved in its operation, power-supply or control mechanisms.

Other major features are large dryland storage with sufficient space for sorting by species, long covered green chain, large separate planer building with facilities for 100% inside carloading. The mill power plant was designed to allow maximum production. The lighting levels through the mill were engineered to provide high level visibility at all production points. Electrical equipment was located for ease of housekeeping and for ready accessibility. This in turn reduces maintenance costs and minimizes down-time.

Facilities are included for sorting and kiln-stacking of outside purchased lumber. Increasing planer mill output by buying rough green lumber has made Plum Creek one of the larger shippers in the state of Montana.

Mill design was selected to fit the logs, said Fred Winegar, superintendent. "We chose a righthand band headsaw because it is easier to get sawyers for a RH mill. The Union edger is a big double 84" machine, fast enough to handle the output of the gang plus all the slabs off the headrig and lumber from the resaw.





"We tried to keep manpower requirements down, except at the trimmer, where two men are used. With the trimmer moving at high speeds, one man cannot get the maximum grade recovery and automatic trim saws cannot cut out the fish tails.

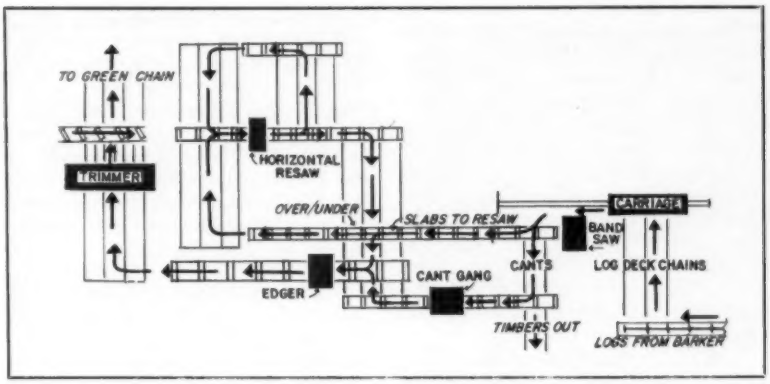
"All lumber is sorted by width, length and grade on the 185' green chain. We can get close to a 100% sort. Everything is saved down to 4"x6' pieces, the rest goes into the chipper."

The mill building was erected to take advantage of the extensive daylight by use of plastic skylights.

The panels are an innovation of Dix Steel Co., of Spokane, Wash., who furnished the Soule 180x180' galvanized steel structure. The wood deck of the sawmill is a separate floor to help reduce vibration.

Kiln capacity for the two Wilson track kilns is 93,000 bd. ft. each. Kilns are 24' high and 84' long. Heat transfer is transmitted by copper tubing with fans automatically controlled. The 8 fans in each kiln reverse every 4 hours. Douglas fir and larch 8/4 drying time is 60 hours and 48 hours, for 4/4, reducing to 12-14% moisture content. Spruce and ponderosa pine require 48 hours.

(Continued on next page)



Single operator controls logs from deck, to barker, to storage or mill

Operator at Dixie-Control panel (right) looks down on log decks, conveyors, cut-off saw, log clamp, log stops, barker, outfeed conveyor, bark conveyor, pond and incline ladder to the mill, (left) all controlled from his station.

Material flow is shown at left.

- Tree-length logs are loaded on log deck with front-end loader (1).
- Operator in control house (2) takes over.
- Logs are fed up and kicked into first section infeed rolls by automatic kick and hold.
- Operator selects proper lengths to cut. He depresses a handle and a log stop comes up in the conveyor at selected length to be cut.
- When log is stopped, operator sets clamp with another control and depresses auto-saw lever, retracts log stop.
- When saw reaches limit of cut it automatically retracts, clamp is released and the mill length section proceeds to the debarker (3).

- Operator restarts the first conveyor section to send the other mill length to the debarker and repeats, proceeding with the next log on the deck.
- Mill length logs are automatically barked. Bark is carried away and log proceeds to a 2-way kicker. This will kick log either to storage deck for transporting to the jack ladder to the mill deck (4) or to the small storage pond (5).

(Continued from page 37)

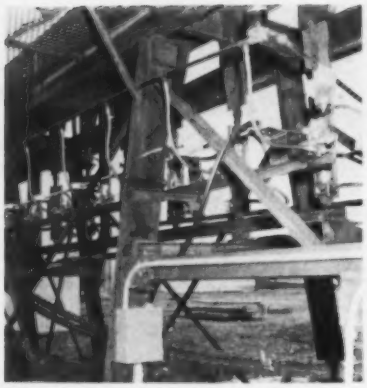
TREND SAWMILL relies heavily on many electrical installations to make the job easier

Each building is supplied electrical service via underground conduit to the firm's own transformer banks, one for the planer and two for the sawmill.

The 1000 KVA outdoor substation, adjacent to the planer building drops voltage to 440 volts and transmits it via 1600 amp low-impedence bus duct to main metal-clad switchboard situated in central control room. This is a special enclosed control room used for no other purpose.

The planer drive on the Stetson-Ross 12-knife 6-12MA-1 is a continuously variable-speed regular DC drive with speed regulation and current limit by MagAmp static control. Reverse and forward jogging of the feed table are automatically performed at 1/6 of the base speed, regardless of the planer drive speed. There is regenerative braking on the drive motor to stop rotation almost instantly, if necessary. The drive always accelerates according to the load; there is an automatic current limit.

The DC feed table drive can be set to keep a continuous ribbon of lumber moving into the planer knives.



LOG LENGTHS ARE PRE-DETERMINED from the control center. Log stops on the bucking conveyor are activated by limit switches shown here beneath the conveyor chain leading to the barker.

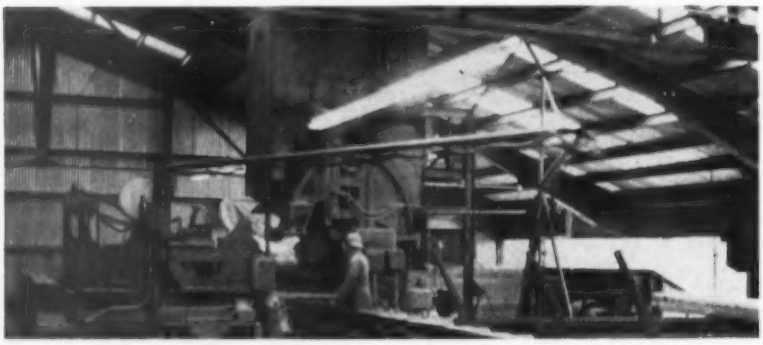
SPECIAL CONVEYOR MOVES logs from the yard to the bucking saw. They are cut to length by electric-powered chain bucking saw. Sawdust drops into the conveyor for removal. Logs then proceed to the barker.

General plant lighting in the planer mill is by high-bay mercury fluorescent fixtures operated at 440V. These lights have low power consumption, a long life (7000 or more hours), offer good illlumination with substantial savings in wiring and conduit. Emergency incandescent lighting and exterior flood lighting are automatically controlled by photoelectric cells. All lighting equipment is Westinghouse.

Signal light system in the planing mill works as follows: if mechanical trouble develops at any point in the finishing end, the man nearest the trouble area presses a button. This flashes a coded signal light in the strategically located grinder room. The light flashes continuously until the supervisor personally answers the call.

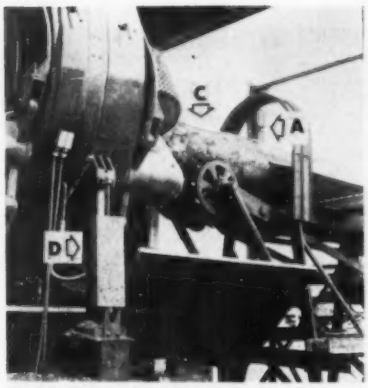
Large motor starting throughout the plant is by reduced voltage, automatic pushbutton magnetic starters. There are no oil starters in the mill.

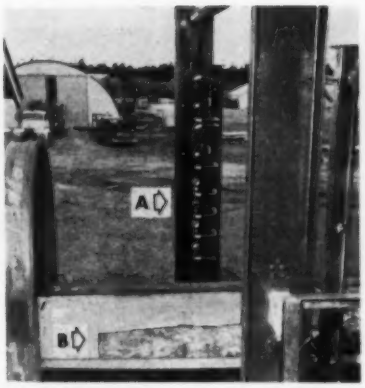
Drive motors for all major sawmill equipment includes: Band mill 200-hp, 900 rpm wound rotor electric motor with fully automatic starting and braking control; gang mill, 600-rpm 150-hp induction electric motor; edger, 100-hp 1800 rpm standard electric motor; log carriage drive, Amplidyne control AC-DC drive; trimmer, 40-hp to-



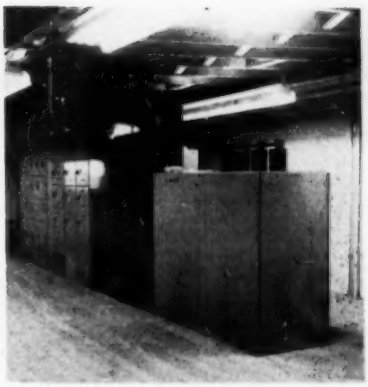
BAND HEADRIG is a 7-foot Monarch with riderless carriage. Unit is air-electric with General Electric Amplidyne AC-DC drive. Note lighting and skylights to provide good vision.

CANT GANG SAW, at left, is a 30-inch Esterer unit. Cants cut on the headrig are fed directly to this gang. From the gang they are transferred to Union double 84-inch edger.





SELF ADJUSTING FEATURE of 43-inch Soderhamn Cambio barker is shown here. Log B approaching barker from right passes through steel archway equipped with battery of photoelectric cells (A). A small log such as B does not intercept cell's beam, proceeds into barker at barker's lowest position. Large log such as C intercepts one of the beams and barker is raised on cylinder (D) and another similar cylinder on opposite side to take log in center of barking ring.



MAIN SWITCHBOARD includes controls for planer motor control panel, motor control center for all auxiliary drives and Mag-Amp regulated DC planer drive motor-generator set. Also, there is a dry-type transformer.

tally enclosed electric motor; chipper, 350-hp synchronous motor with magnetic reduced-voltage starting equipment.

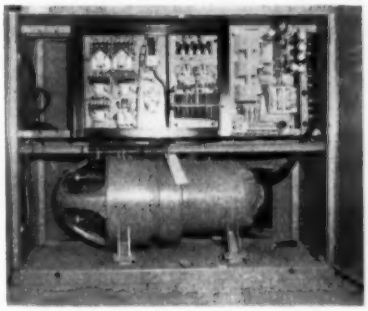
Power enters main mill at 4160 volts through an underground cable leading to a double-ended 600 KVA dry-type transformer substation. (4160 volts is also fed to a 450 KVA chipper substation). All of the large motor controls are centrally located in substation.

Both headrig motor and horizontal resaw motor are equipped with Westinghouse DyNac automatic magnetic wound-rotor control for deceleration to stop in less than 30 seconds.

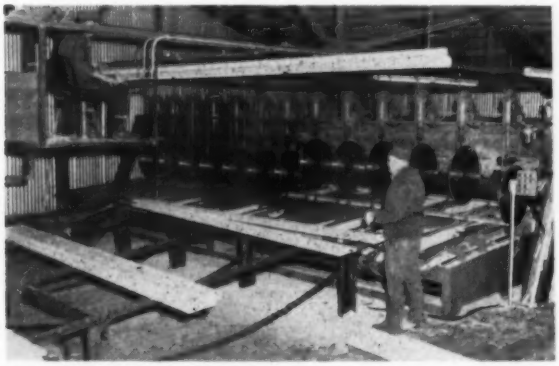
All of major control equipment is equipped with incomplete-sequence-protection which will automatically shut off controls in case any of the automatic starting features fail to work properly.

The chipper substation delivers 440V to its own control center, also of modular, plug-in type, and to the synchronous motor reduced-voltage starter for the 350-hp chipper motor.

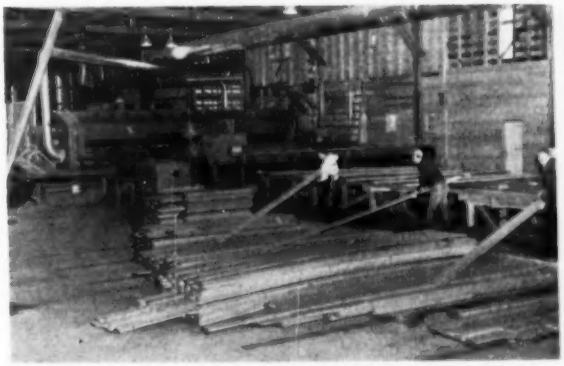
Sawmill lighting is furnished entirely by high-output 800 MA fluorescent fixtures. Dry-type power transformers convert lighting power to 100V. Out in the yard are mercury flood lights, controlled by photoelectric cells.



WESTINGHOUSE MAG-AMP-controlled motor generator set is a distance from planer drive for which it furnishes power. Planer drive can be set instantly at any given speed.



TWO-MAN CREW operates Albany saw drop trimmer. Superintendent Fred Winegar says this combination of man in cage and man on floor pays off in higher recovery of merchantable lumber.



PLANING MILL IS LOCATED behind Irvington trimmer. Lumber is end-printed and waxed on the production line. Trimmer is random length unit. Arrow points to end printer and waxer unit..

PRINCIPAL EQUIPMENT

MICHIGAN 175A front end loader; MONARCH carriage and 7-foot band mill; WESTINGHOUSE motors; GENERAL ELECTRIC Amplidyne drive; PACIFIC WESTERN gear; PRESCOTT horizontal band resaw; UNION IRON WORKS edger; ESTERER gang mill; ALBANY 13-saw trimmer; WESTINGHOUSE DyNac braking.

ARMSTRONG and HANCHETT filing room equipment; WORTHINGTON compressors; SOULE steel buildings; WESTINGHOUSE lighting and electrical equipment; ANACONDA wire and cable; DIXIE CONTROLLER console control panels; SUMNER chipper; SODERHAMN barker and chip screen; ARCHER blower system; SUTORBILT blower; DODGE power transmission.

STETSON-ROSS planer; MOLINE chain; STETSON-ROSS tilting unstacker; LINK-BELT gearmotor; YATES-AMERICAN A20 planer; INGERSOLL-RAND compressor; IRVINGTON random-length end surfacer and end printer and 2-saw stud trimmer.

HANCHETT grinder; STETSON-ROSS grinder; ARMSTRONG circular grinder; J. A. WILSON dry kilns; YORK-SHIPLEY boiler; HONEYWELL controls; FOXBORO recording instruments; DELCO-WESTINGHOUSE fan generators.

Closed Circuit TV and Remote Controls Team To Handle Mill Fuel

Results are a cleaner operation, accomplished more efficiently with increased safety for the men.

Television monitor at Santiam Lumber Co. is 17-inch General Electric model. Fireman operates toggle switch controlling camera tilt and pan with wobble stick in left hand and dragline with right hand. All conveyor controls are mounted on the panel.

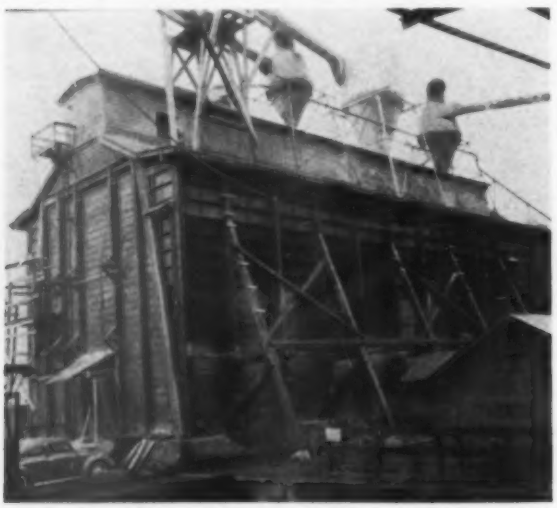
Integrated automatic controls and closed circuit television guidance handle all fuel-handling operations for two Western Oregon firms in a move toward safety, efficiency and economy.

Both plants formerly had men working in the fuel pile, digging by hand in the often unpleasant job of mixing fuel and feeding conveyors to the boilers. It was difficut for the fireman to obtain exactly the right fuel mixture he desired.

A TV screen now monitors the work in both operations, allowing the fireman to remotely control the fuel digging and conveyor feeding. Television cameras and monitors are mounted in dust-proof enclosures to reduce maintenance.

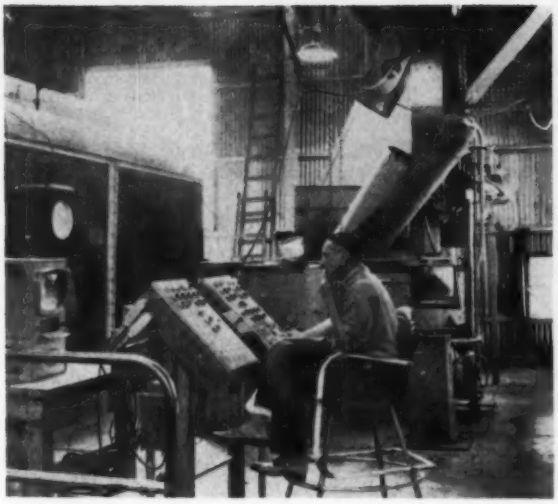
At Santiam Lumber Co., Sweet Home, Ore., engineer Joe Clark set up a system where the fireman controls normal operations from the console. Eight mirrors mounted above the observation ports on the two 650-hp Garrett and Schafer boilers and aimed at the control console allow him to watch all his fires. He can increase or reduce fuel to each of the fires by panel switches actuating Valvair valves and Modernair air pistons moving the regulators for each fire in the fuel feeding tubs.

The Zidell-driven agitator swinging around each of the two tubs insures even distribution of fuel to each of the openings. A safety wire is stretched around the perimeter of each tub that when pulled actuates a Square D limit switch stopping the agitator.

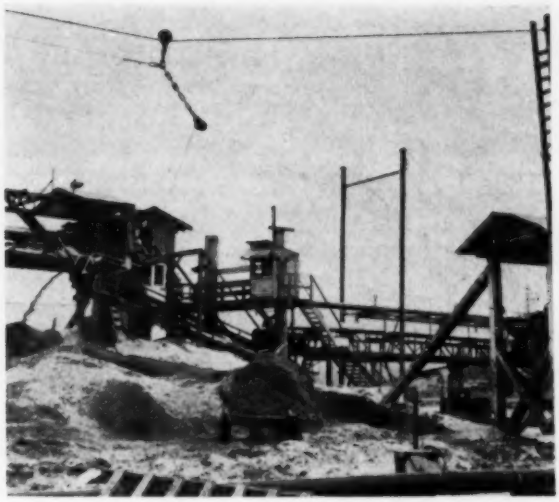


At Edward Hines Lumber Co. fuel house takes residues from throughout plant. Planer shavings, sander dust and sawdust are blown to storage (top). Hog fuel is conveyed to fuelhouse. A remote-controlled crane and a television monitor work within this building.

TV camera is mounted high in fuelhouse to obtain view of whole operation. It is a Dumont unit. Pan and tilt are controlled by the fireman to focus it on his work. Windshield wiper keeps the glass free of dust when required. The hood protects the camera against direct glare.



Mirrors extend view of fireman to all eight of his fires in the two boilers. He controls fuel-flow to each fire by piston-operated flap feeding each fire. Fuel is moved in from the pile and into the chute above each of the two mixing tubs at Santiam Lumber.



Conveyor moves hogged bark from fuel pile. GE 15-hp-powered double drum at right operates dragline. Bucket is in center. TV camera is located in enclosure below block. Kenrad reflector floodlights turn with the camera for illumination during night operation.

At Santiam Lumber Co. Mr. Clark built the tilt and pan system which employs Boston gear reduction units driven by ¼-hp three-phase motors controlled by a wobble stick at the control console.

Stops are mounted to stop the camera at the extreme points. The V-belts driving the camera slip, for protection, when the stops are reached. A sunshade is mounted at the top to protect the lens from the sun's direct rays.

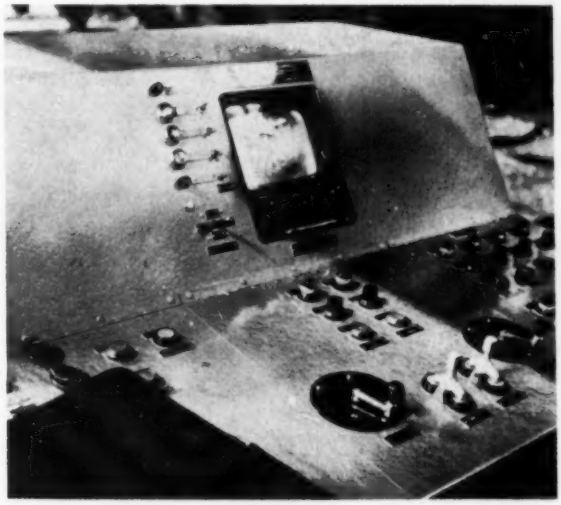
Ordinarily, fuel comes direct from the mill to the boilers. If fuel should be cut off from the mill, the fuel storage conveyor starts automatically to keep fuel supplied to the boilers. The boilers operate from the fuel pile during noon hours, at night, and other times when the mill is shut down.

At Edward Hines Lumber Co., Westfir, Ore., a remote controlled 36-foot Ederer bridge crane-mounted boom and rake with a reach of 17 feet does the job of fuel mixing and feeding the boiler conveyor. The bridge is driven by a totally enclosed expansion proof gear motor with a fluid coupling. The gear and pinion at each end of the drive shaft is covered. Power to the crane is by covered cable.

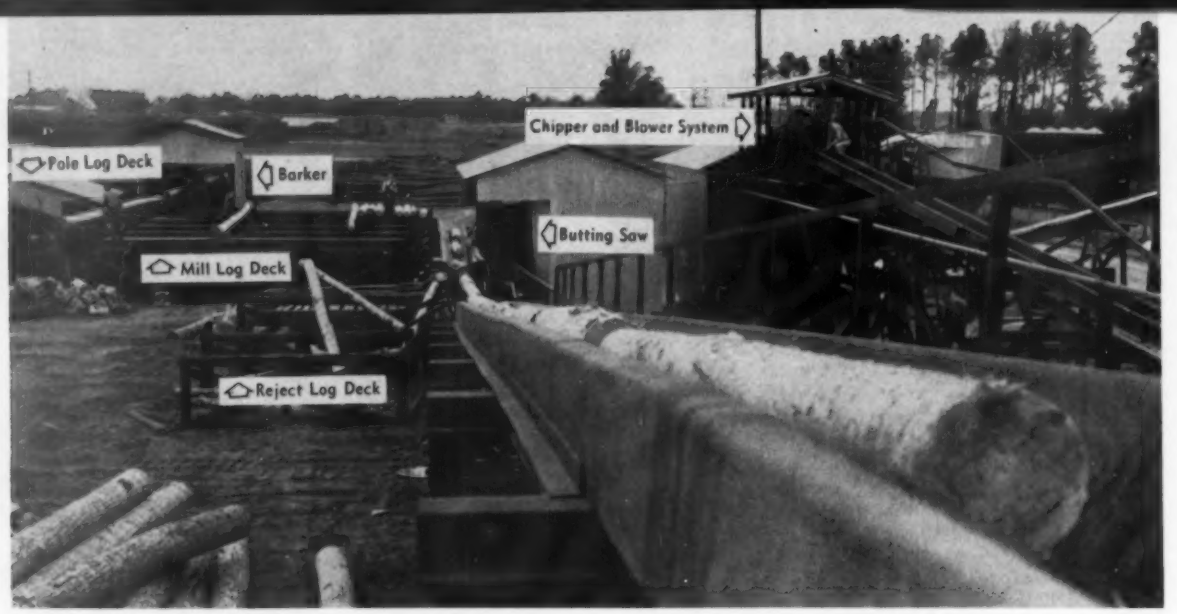
Fuel from throughout the company's sawmill, planing mill, veneer and plywood plant is all blown or conveyed to the fuel house where the Ederer bridge crane allows the hydraulic rake to reach any point in the house. A Vickers hydraulic pump powers the hydraulic system.

Ceiling-mounted mercury vapor lights provide a high level of illumination necessary for the camera.

Ederer bridge cranes move across ceiling carrying boom and rake which are controlled by a fireman to mix the fuel and serve the boiler conveyor. A Vickers hydraulic pump powers the unit. Mercury vapor lights provide the good illumination required for the camera at Hines.



Control panel is a Controls & Communication installation. The Dumont fuel bin TV monitor screen at the top shows the rake installation in action. The camera control switch is at left of screen. Controls for the conveyor and rake and boom are on the bottom plate of unit at Hines.



Tree-length logs from the barker emerge onto concave roll case. Logs suitable for poles are kicked off onto deck at left; mill logs move to deck at right and are inspected for imbedded metal or defects. Mill logs are cut to length by a butting saw and proceed by chain log haul to mill. Reject logs are kicked off onto deck for removal.

Automatic Handling Solves Small Log Problem

at southern mill cutting lumber from logs averaging only 8½ inches

Officials of The Langdale Company, Valdosta, Ga., were faced with a specific problem. They are owners of approximately 150,000 acres of timberland and are the world's largest producer of naval stores. Intensive research had rewarded them with methods whereby they could turpentine their pines for several seasons with no damage to the wood in the trees.

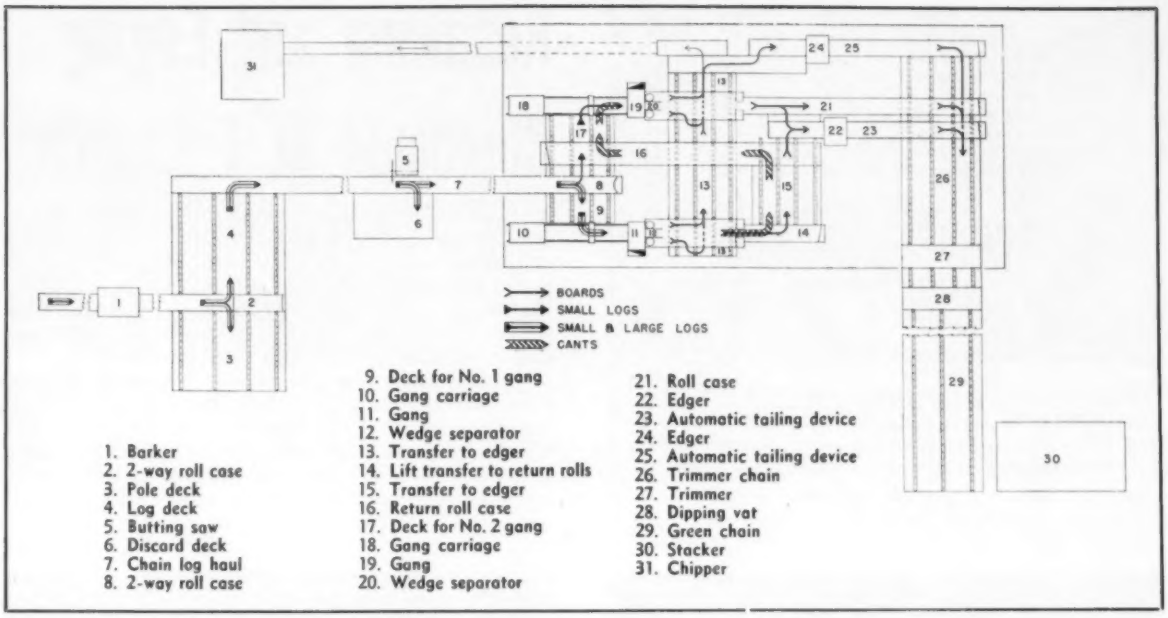
The timber suitable for poles was brought into the modern creosoting plant which Langdale operates at Valdosta. The problem was how to convert the balance of the timber into profitable products.

The goal was to prove that maximum utilization could be realized. This decision was a natural as the Langdale operation is one of the nation's most conscientious Tree Farm advocates and the Langdale family is a firm believer and active worker in conservation.

Engineers of Corley Manufacturing Co. were handed the problem and together with Gebruder Linck gang saw engineer and L. V. Richardson who heads The Langdale mill, designed the plant.

Automatic handling methods, some new to the region, were adapted in the mill layout after the completed study. Fool-proof conveyors and transfers were installed. Logs, lumber and waste can be speedily moved with

View from gang saws shows: Offbear rolls (1) from the No. 1 gang. Lumber hits stop and automatically is transferred to center rolls (2) which return cants to feed table for the No. 2 gang. Lumber crosses over to edger (3). Board with wane edges and slabs from No. 2 gang saw drop from spiral rolls onto transfer to edger (4). Clear board travel on rolls and drop onto trimmer chain for trimmer (5). Edgers have hydraulic saw shifts.



1. Barker
2. 2-way roll case
3. Pole deck
4. Log deck
5. Butting saw
6. Discard deck
7. Chain log haul
8. 2-way roll case
9. Deck for No. 1 gang
10. Gang carriage
11. Gang
12. Wedge separator
13. Transfer to edger
14. Lift transfer to return rolls
15. Transfer to edger
16. Return roll case
17. Deck for No. 2 gang
18. Gang carriage
19. Gang
20. Wedge separator
21. Roll case
22. Edger
23. Automatic tailing device
24. Edger
25. Automatic tailing device
26. Trimmer chain
27. Trimmer
28. Dipping vat
29. Green chain
30. Stacker
31. Chipper

a minimum number of workmen. Logs coming into the mill on a roll case specially designed by Corley can be transferred and loaded onto either gangsaw carriage by the sawyer.

Boards and slabs are segregated from cants at the back of the gang by a Linck automatic wedge separator. Cants automatically travel to the second gangsaw. Board and slabs are speedily transferred to one of the two Linck edgers, each equipped with hydraulic saw shift and automatic tailing device. All manufactured lumber from both the cant gang and the edgers pass through the trimmer and a dipping vat onto the green chain.

Since the beginning of this operation, The Langdale Company has concentrated on an extensive thinning program in its forests and has been bringing little but the smallest timber into the mill. To date average log diameter has been only 8½". Even in this small timber the company manages to produce about 50,000 feet per 8-hour day, or at the rate of 1,000 feet per man hour for the six men needed on the mill floor. Vice-president A. W. Skoropat is convinced that when they are in position to bring in larger logs, averaging 12" diameter, the same crew of six men will produce at least 1,500 feet per man per hour.

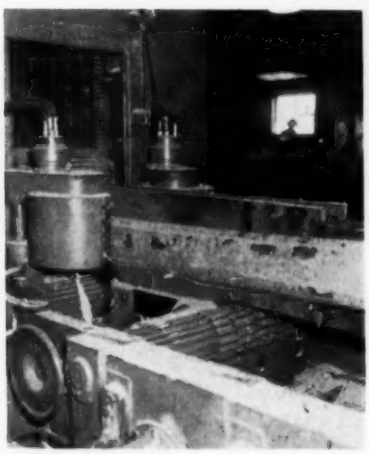
The mill is getting 34.67% overrun on the Scribner scale. Grade recovery has been almost 100% on even the largest logs sawed.

PRINCIPAL EQUIPMENT

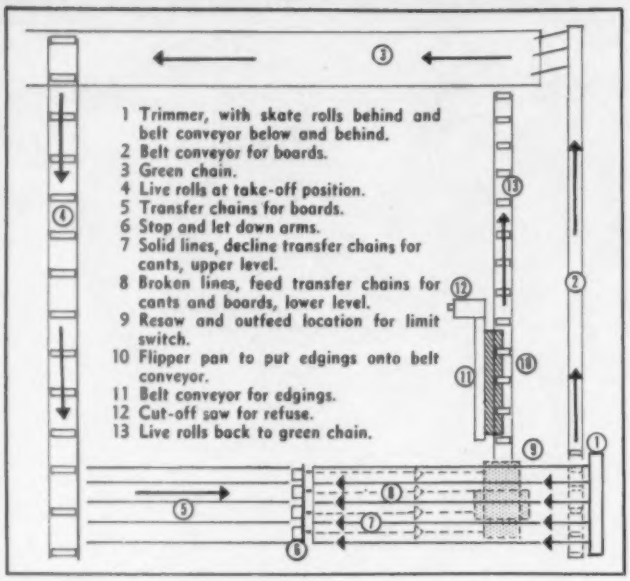
LINCK gangsaws and carriages; GENERAL ELECTRIC motors; DODGE couplings; LINCK edgers; GATES Poly-V belts; CORLEY roll cases and transfer systems; MOLINE chain; VOLLMER gangsaw sharpener; HANCHETT saw fitting tools.

NEWMAN chipper knife grinder; SODERHAMN 26" Cambio debarker; SODERHAMN HF-60 chipper; REES burner, LAWSON stacker; CARY-LIFT log loader; TAYLOR lift truck; GERLINGER fork lift; MITCHELL BROS. building; ALBANY log deck and conveyors.

Gang sawyer, from his chair, controls roll case gates, live deck advance, carriage loading, setting of automatic saw width adjustment and automatic wedge separator, rate of feed, turning and positioning of logs and carriage return. Dial on Linck saw shows setting of automatic saw width adjustment.



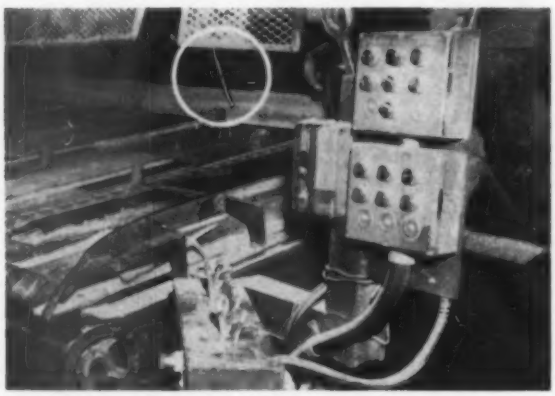
Wedge separator, on offbear side, works in conjunction with saw width adjustment so wedges follow inside saws. Rolls move material to edgers.


1 Trimmer, with skate rolls behind and belt conveyor below and behind.
2 Belt conveyor for boards.
3 Green chain.
4 Live rolls at take-off position.
5 Transfer chains for boards.
6 Stop and let down arms.
7 Solid lines, decline transfer chains for cants, upper level.
8 Broken lines, feed transfer chains for cants and boards, lower level.
9 Resaw and outfeed location for limit switch.
10 Flipper pan to put edgings onto belt conveyor.
11 Belt conveyor for edgings.
12 Cut-off saw for refuse.
13 Live rolls back to green chain.

Resawing and Edging Combined in 1 Linebar

Prior to the creation and installation of this system, U. S. Plywood Corp.'s sawmill at Anderson, Calif., had all lumber lowered to the green chain. After it had passed the graders, lumber hit two jump rolls which sent it to a small edger and to a self-centering resaw. Resawn lumber would return to the green chain below the incline and thus cants were allowed to fall on top.

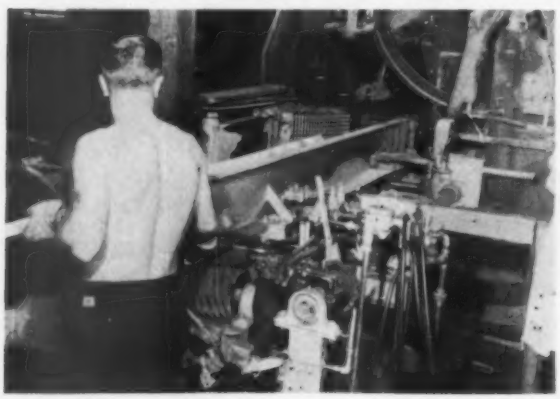
With the new arrangement there is selection of cants behind the trimmer and transfer of them directly to lowering chains and on to the linebar resaw. Also, in the new setup, edgings are automatically removed from the boards as soon as they clear the resaw outfeed and then go to a timed cutoff saw. Here's how the system works.



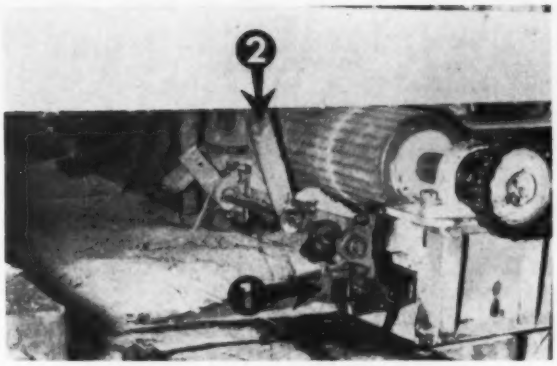
1. Sensing wire, or thickness gauging wire, has just cleared trailing edge of cant (circle). This device solves problem presented when cants are being dropped onto resawn boards. The wire, when tripped by cants, activates time delay limit switch. Skate roll arms directly behind trimmer then are lowered into position to receive cant.

2. Skate-roll arms behind trimmer have done their job and cant is on cant transfer chains. Arms are in up or open position and a board may emerge from trimmer and slide down slides directly below arms. Cant in photo is directly above live rolls which start boards on their way. Large mirror at right allows operator view of outfeed side.

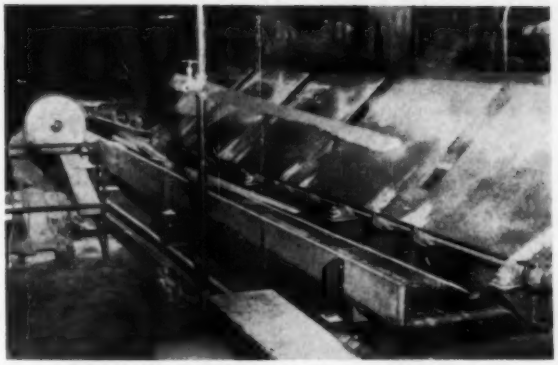
3. Operator can open the linebar on Filer & Stowell 6-foot resaw to 24 inches against the fence to allow edging wide Shop and Selects. Unit is set for edgings in photo.



4. Stock for resawing is partially past saw blade in this photo. Worm drives, hidden when unit is edging, are now visible. Linebar is a Sawyer Machinery Co. unit.

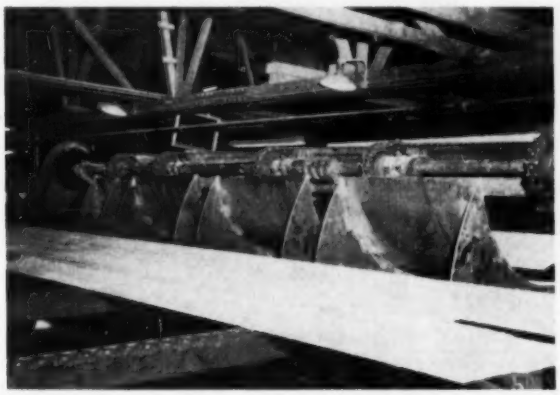


5. Limit switch (1) on outfeed side of resaw is unaffected during resaw cut, as stock moves alongside the arm (2) which trips the switch. An edged board hits arm and the limit switch then activates a flipper pan to lift the edging up and away from the board.



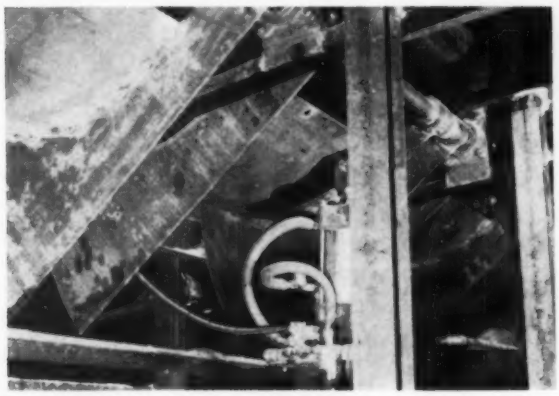
6. Flipper pan is lifted by air cylinder. Edging refuse slides onto conveyor belt. Belt is set to move forward two feet after each pass of Sumner cutoff saw at far end. Openings in flipper pan allow it to settle below top level of the live rolls in the down position.

7. Takeoff point on the green chain where material to be edged begins merry-go-round trip. Albany Machinery Supply live rolls, foot pedal-controlled, move boards from green chain. Near set of rolls is now used.

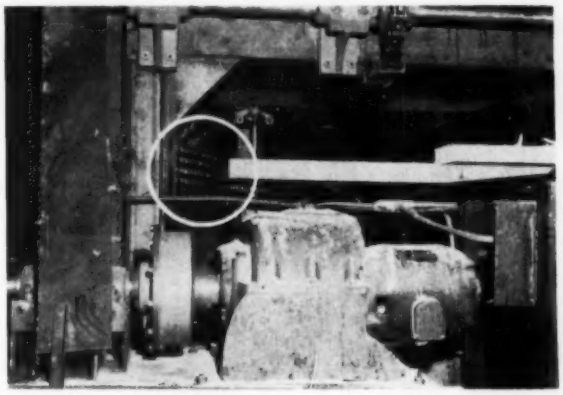


8. Drop end for cants, and hold back position for board is here. Four stop-and-let-down arms are installed. One cant is partially visible in curve of near arm, from which it is picked up by transfer chains to resaw feed station.

9. Stop and let down arms in the down position, view from below. Portion of the air cylinder which actuates the arms is shown. Cylinder is equipped with Speed King valve. These arms are down when the top (cant) chain is not in action, thus allowing continuous feed of boards.

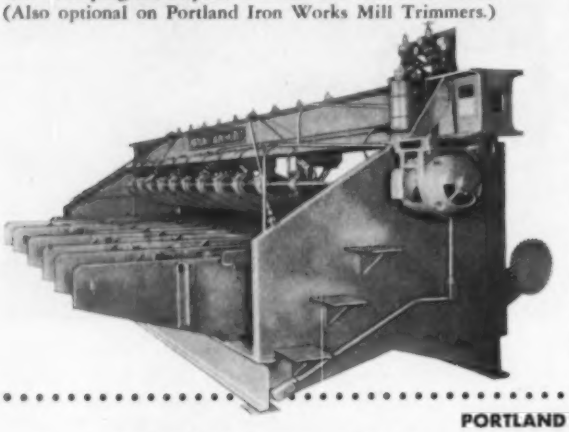


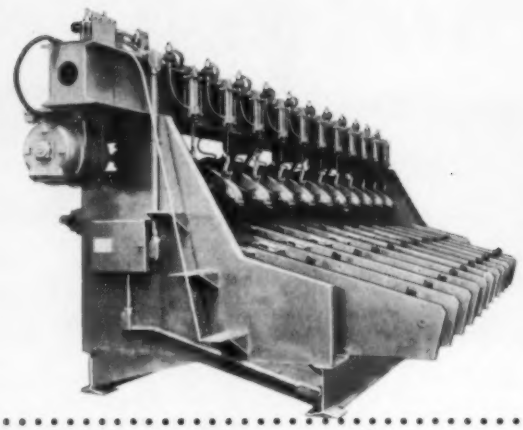
10. End of cant travel is at top, where shaft and one chain are visible. The two boards have already left the top position and passed over the stop arms, which are down. They will shortly make contact with 4-strand vertical bank of crowder chains (circle) and be aligned.



FLAT TABLE OR SLOPING TABLE

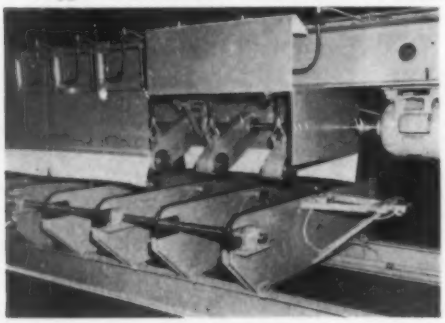
Flat or sloping table optional on the smooth end trimmers. (Also optional on Portland Iron Works Mill Trimmers.)





PORTLAND IRON WORKS

"Trigger" Trimmers are available with overhead *(below left)* or undertable *(below right)* dust collection systems.



HERE'S 100% SMOOTH END TRIMMING

No shorts

No dancing lift wheels

PORTLAND IRON WORKS "Trigger" Trimmer (covered by U. S. Patent No. 2,714,407 and Canadian Patent No. 263,381) *automatically* selects saws which trim each board at maximum marketable length. A board cannot pass without proper trim. *Human error* is eliminated as each board—at incredible speed—passes through this trimmer. Precision engineering, close tolerance and the most advanced design are yours with "Trigger Trimming".

With PORTLAND IRON WORKS there are no *standard* Trimmers. Each is custom built to completely fulfill the needs of your own particular mill.

PORTLAND IRON WORKS INCORPORATED

1335 N.W. Northrup Street
Portland 9, Oregon
CApitol 7-1107
Teletype PD565

experience is our best designer

engineers
machinists
founders
established 1882

PERFORMANCE!

GET THE PERFORMANCE YOUR ENGINES WERE BUILT TO DELIVER WITH NEW 7600 GASOLINE!

If you'd like to get top performance out of your engines —Union's new 7600 regular gasoline is the fuel for you!

7600 is the West's Finest regular gasoline with octane high enough to give knock-free operation to 4 out of 5 vehicles on the road.

And because new 7600 regular contains Union's exclusive additive NR76 to clean carburetors chemically, you'll reduce engine maintenance measurably.

Call your Union Oil representative for immediate delivery of new 7600 gasoline. It's powered like a premium but priced like a regular!

UNION OIL COMPANY
OF CALIFORNIA

76

Union Oil Center, Los Angeles 17, California, U.S.A.

Sweed — WHOSE WATCHWORD IS PROGRESS — ANNOUNCES ANOTHER OUTSTANDING MACHINE IN ITS SEASONED LINE OF SUCCESSES . . .

Sweed LIFT CAM & SCISSOR CONSTRUCTION

with conveyor chains or platform

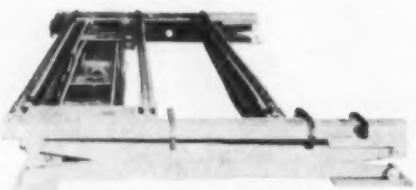
. . . . . IN 3 SIZES

★ GIANT Sweed . . . hydraulic
- 12,000 lb. capacity
- 16¼" collaapsed height
- drops in 4 seconds

★ JUMBO Sweed . . . screw type
- 7500 lb. capacity
- 10" collapsed height

★ PONY Sweed . . . screw type
- 4000 lb. capacity
- 8½" collapsed height

- HEAVY DUTY
- CONTROLLED SPEED
- RUGGED
- RELIABLE



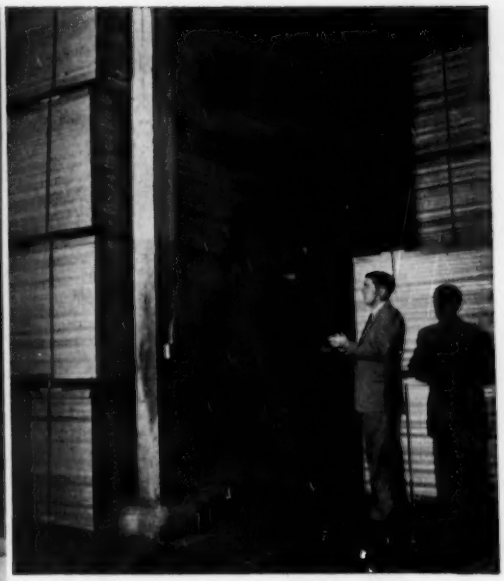
. . . showing collapsed position

SUCCESS IS THE RESULT of progressive engineering in the Jeddeloh Bros.' Gold Hill Plant— where progress and service are cardinal principles of operation.

Write for Sweed Lift brochure today . . . .

Telephone Ulrick 5-1316
JEDDELOH BROTHERS
SWEED MILLS, INC.
Gold Hill, Oregon

Sales Representative
NATIONAL MACHINERY SALES
Gold Hill, Oregon — Ulrick 5-1145
Portland, Oregon — Olive 4-1906



Steel strapped bundles stack higher, are fast and easy to count.

Signode Power Strap Feeder puts strap around bundle of 27 doors in seconds; air power tensions strapping. Fibre-board sheets and wood runners top and bottom protect door surfaces.

Low cost Signode method of unitizing flush doors

...cuts loading time in half
...reduces in-plant handling
...reduces in-transit damage
...saves time and space in storage

One-at-a-time handling of smooth, slick flush doors has been changed by steel strapping to mechanized handling of multi-unit bundles. Damage from handling, storage, and shipment has been reduced, and substantial amounts of time are saved in the handling, storing, and loading operations. These same advantages appeal to the distributor, make unitized doors easier to sell. The savings and advantages far outweigh the costs of unitizing. Total material cost of the 27-unit bundle, for example, is $1.38, of which only 18 cents is for steel strapping and seals. The Power Strap Feeder, which permits one man to strap big bundles, saves enough to pay for itself from the start. For more information about this application or to find out how Signode can help you cut costs and improve handling and shipping, call the Signode man near you, or write:

SIGNODE

First in steel strapping

SIGNODE STEEL STRAPPING CO.

2616 N. Western Avenue, Chicago 47, Illinois

Los Angeles 1, 659 East Gage Ave. • Pittsburg, Calif., Loveridge Road • Eugene, 1955 Todd
Portland, 1519 N. W. Irving St. • Seattle 4, 1750 Occidental Ave. • Spokane, 617 Paulsen Bldg.
Olympia, 1024 Eskridge Blvd. • Canadian Steel Strapping Co., Ltd., Vancouver, B.C.

H HONEYWELL

MICRO SWITCH Precision Switches

18 PA1 Terminal Enclosure
—is common to all actuator assemblies in the "200LS" series. Can be mounted from front, back or either side.
3.590
1.350
1.920
4.050
1.170
1.920
PULL OUT
PLUG IN
Actuator plugs into terminal enclosure —contains all moving mechanical and electrical parts.

201LS3 Adjustable Arm Rotary Actuator Switch
208LS1 Coil Spring Actuator Switch
201LS10 Rod Actuator Switch
205LS1 Roller Plunger Actuator Switch
202LS1 Push Plunger Actuator Switch
201LS1 Roller Arm Actuator Switch
203LS1 Side Roller Plunger Actuator Switch
204LS1 Side Plunger Actuator Switch

Sealed "Plug-in Limit" switches insure against costly downtime

Now available in 8 actuator types

Here's a sealed precision limit switch that can be replaced complete in 20 seconds! Downtime is all but eliminated!

A "Plug-in Limit" switch, in any of eight actuator styles, plugs into the terminal enclosure like a radio tube . . . is precisely positioned by dowel pins and secured by two No. 10 screws. Together, the two parts form a dependable switch assembly, sealed against oil, water, dirt and dust.

The "Plug-in Limit" is two-circuit double throw. Electrical rating is 10 amps. 120, 240, 480 vac; ½ H.P. 120 vac; 1 H.P. 240 vac; 0.8 amp. 115 vdc; 0.4 amp. 230 vdc; 0.1 amp. 550 vdc. Pilot duty rating is 600 vac max. Meets NEMA Industrial Control Standards.

For details of the "200LS" series, write or call the MICRO SWITCH branch office or authorized distributor near you, or send for Catalog 84.

MICRO SWITCH . . . FREEPORT, ILLINOIS

A division of Honeywell

In Canada: Honeywell Controls Limited, Toronto 17, Ontario

H HONEYWELL **Honeywell**

MICRO SWITCH Precision Switches

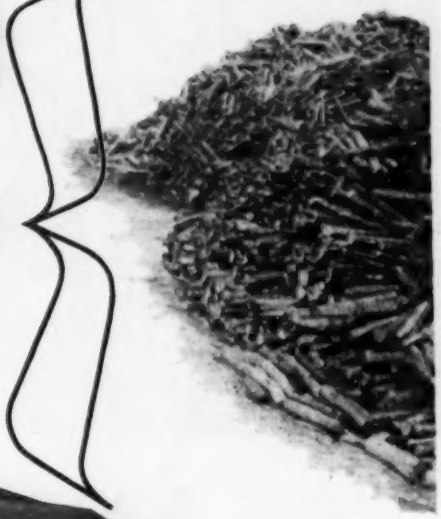
NEW MULLIS LOG SKINNER

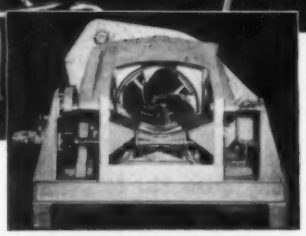
Designed Especially for

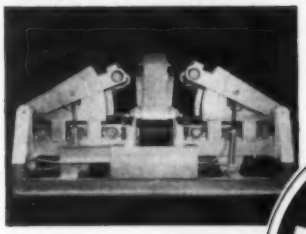
Pulpwood & Small Logs

Will Bark Logs as Short as 4 Feet

Barks as Small as 3" Diameter and Up to 26"







- Powered Infeed and Outfeed Rolls, 3 of Each
- Hydraulic-Pressure Hold Down Rolls Also Powered
- Special "Thin-Line" Air-Tank Design Eliminates Clogging
- Push-Button Controls Provide Complete Command of Barking Operation
- Can Be Made Portable and with Fully Automatic Action

Larger Sizes of the Mullis Log Skinner Up to 60" Available

Western Headquarters

L-M EQUIPMENT COMPANY
THE HOUSE OF CHAIN SAWS

8705 S. E. 13th Ave.
P. O. Box 4681
Portland 2, Oregon
Phone: BE 5-3146

for

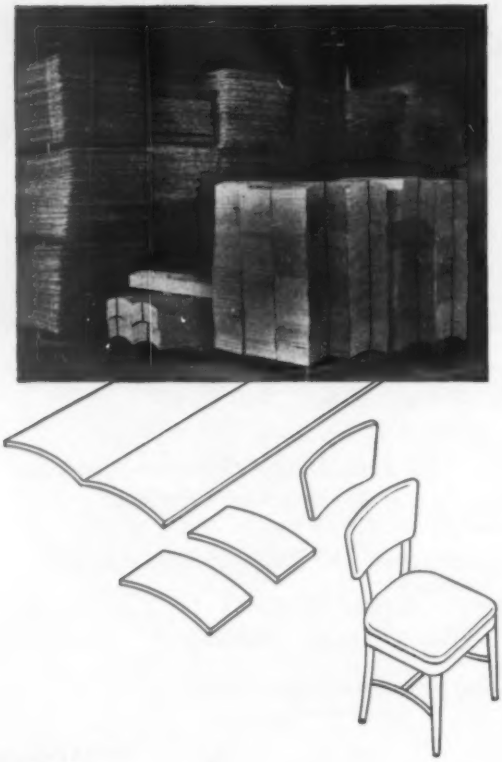
CARL W. MULLIS
ENGINEERING & MANUFACTURING CO., INC.
LANCASTER, S. C.

WRITE for complete information on the Mullis Log Skinner for Pulpwood and Small Logs.

SALES • SERVICE • INSTALLATION

SWAIN INDUSTRIES, INC.

CUTS FLAT AND CURVED PARTICLE BOARD



On GREENLEE slat-bed multiple cut-up saws with automatic transfer

Swain Industries, Inc. of Seymour, Indiana had a difficult problem to solve. They needed equipment that would not only cut flat but *curved* sheets of particle board . . . speedily and economically. Representatives of Greenlee and Swain working together in close cooperation came up with the answer.

The Greenlee Cut-Up Saws shown above can take five 37" x 118" double curved panels and convert them into 90 accurately cut chair backs in one minute. Flat sheets can be cut even faster.

Feed rates are variable up to 110 feet per minute. Set-ups are made easily and quickly . . . can be changed from flat to curved material in a short time. If you have cutting problems involving particle board or any other type of panels, invite Greenlee to help solve them. Write for complete information.

MACHINERY & TOOLS
GREENLEE

WOODWORKING MACHINERY MANUFACTURERS' ASSOCIATION

GREENLEE BROS. & CO.

1717 TWENTY-FIRST AVE.
ROCKFORD, ILL.

COLUMBIA
HOT PLATE
PRESS
16 daylight, 50" x 102" platen size. Trouble-free hydraulic system, honest ratings are but two of 15 perfected features.
Columbia
COLUMBIA
FLOOR TYPE HOT PLATE PRESS
. . . where one to five daylights are needed . . . in end and side-loading and shuttle loading models . . . floor mounted.

MAKE GOOD PRODUCTS ...GOOD PROFITS, TOO!

Columbia
HOT PLATE PRESSES
Assure
FAST
LOW COST
HIGH QUALITY
PRODUCTION

Wherever you find plywood, veneer, hardboard and other laminated productions, there you will also find Columbia Hot Plate Presses . . . choice of manufacturers who want truly dependable performance.

Columbia Presses meet production requirements and give you a bonus in economical installation, operation and maintenance. For eye-opening details, request Bulletin HP-19.

Write: **The Lodge & Shipley Company, 3060 Colerain Avenue, Cincinnati 25, Ohio.**

TIME-PROVED
Columbia
HYDRAULIC PRESSES
INDUSTRY-APPROVED

Lodge & Shipley

. . . your LODGE-ical choice

Participants in the seeding operation here described, which will ultimately cover 20,000 acres, are the T. L. James Company, William F. Mann, Jr. of the U. S. Forestry Service, the State of Louisiana and Hawk Helicopters, a Charter firm of Fort Worth, Texas.

FOREST SEEDING BY BELL:

6000 acres in three days!

One morning last winter in Louisiana, near Alexandria, three men got out of a truck, marked Hawk Helicopters, and unloaded several sacks of loblolly pine seed. Nearby was a Bell 47G-2. They poured the seed into hoppers attached just back of the G-2's bubble. Then the pilot climbed in, took it up and started making low-level runs over some lonesome, scrubby country that was marked by flags. After 15 minutes of passes, the Bell had planted 100 acres of loblolly pine. In three days, it had sown this hardy seed over 6000 acres . . and the pilot said he could have planted 3000 acres a day!

It was an experiment: helicopter versus fixed-wing in reforestation. Yet this experiment, because of the Bell's ability to work and live miles from a fixed base, happened to set a record for speed that no conventional aircraft would likely approach.

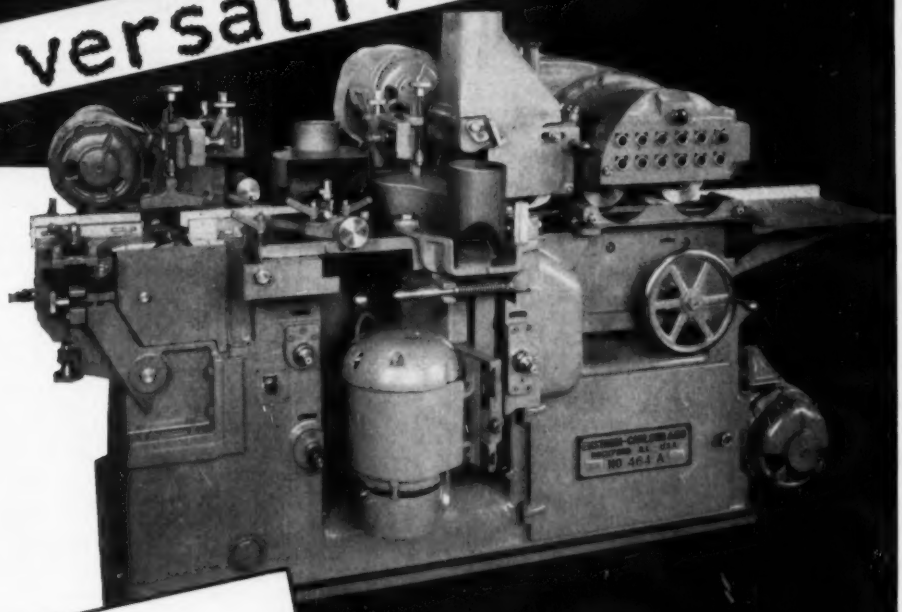
Such experiments with the Bell helicopter are being carried out all over America. We keep track of most, and will gladly send you case reports, Bell model information and names of Charter Operators and Bell Representatives in your territory. Simply write Commercial Sales Manager, Dept. 233I, Bell Helicopter Corporation, Fort Worth, Texas.

BELL HELICOPTER CORP. FORT WORTH, TEXAS • SUBSIDIARY OF BELL AIRCRAFT CORPORATION

EKSTROM CARLSON

No. 464-A Moulder

most versatile machine



BELL LUMBER & MOULDING CO.

PHONE ALPINE 8-2243

795 EAST INDIAN ROAD
PHOENIX, ARIZONA

May 13, 1959

Ekstrom Carlson Machine Co.
Rockford, Illinois

ATTENTION: Mr. Randall Fenton

Dear Mr. Fenton:

For the past seven years I have been running two Ekstrom Carlson moulders in my moulding plant. We have found the Ekstrom the most versatile machine of the four moulders we are running.

We run our Ekstroms either on joint or on saw work. In jointing we joint at 4800 rpm with six knives, thereby obtaining approximately 200 feet per minute. We have never experienced any loss of joint due to extra spindle speeds. In saw work only a matter of minutes is required to change the spindle from 4800 rpm to 7200 rpm.

For a well balanced, versatile moulding plant, an Ekstrom Carlso machine is a must.

BELL LUMBER & MOULDING CO.

By Don Bell
Don Bell

here's why:

The Bell Lumber & Moulding Company letter is written after 7 years experience with Ekstrom, Carlson Moulders.

Moulder is specifically adapted for saw work.

Heads jointed at 4800 R. P. M.

Feed rates from 185 to 205 F. P. M.

Bottom head as saw arbor at 7200 R. P. M.

3600, 4800, 6000 or 7200 R. P. M. spindle speeds —
No Frequency Converter required.

Simplicity of design permits fast changes in head equipment and thereby increases production.

write for bulletin!

ECCO

EKSTROM, CARLSON & CO.
1429 RAILROAD AVENUE ROCKFORD, ILLINOIS

NEW... *Sumner* OFFERS REMOTE-CONTROLLED CARRIAGE SETWORKS!

Of particular interest to sawmill owners these days is an increasingly higher degree of mechanization—one of the most satisfactory and proven ways to meet present day's rising production costs.

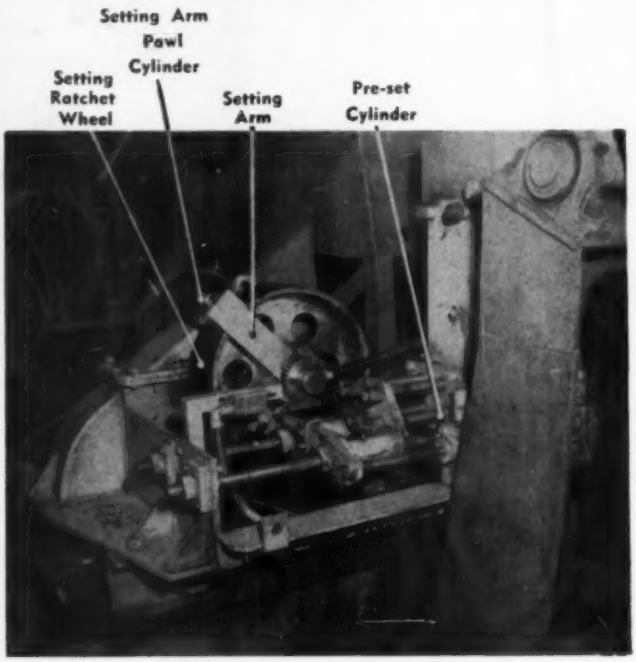
So... Sumner Iron Works is now offering a sawyer-operated remote control carriage setworks. Some of the more obvious advantages in converting a one-man carriage to a no-man sawyer-controlled carriage are:

a. Increased production
b. Better quality
c. The sawyer has complete responsibility
d. The setter is no longer needed

The setworks is absolutely accurate for each pre-set position and in setting has positive metal-to-metal stops. There are no friction brakes and clutches in the machine to get out of adjustment with resulting inaccuracies. The setworks is of simple design with no complicated electrical circuits.

SAWYER CONTROL PANEL

The SUMNER patented, pre-set, remote-controlled, air-operated setworks is designed for installation on any make of sawmill carriage, and is available for either rack and pinion, screw-block or chain-type head blocks. It is powered by a radial cylinder-type air motor and the pre-setting arm is operated by a bank of patented fixed-stroke air cylinders; each cylinder representing one of the common sizes being sawed.



SETWORKS WITH COVER REMOVED

SUMNER

EVERETT, WASHINGTON

Since 1892

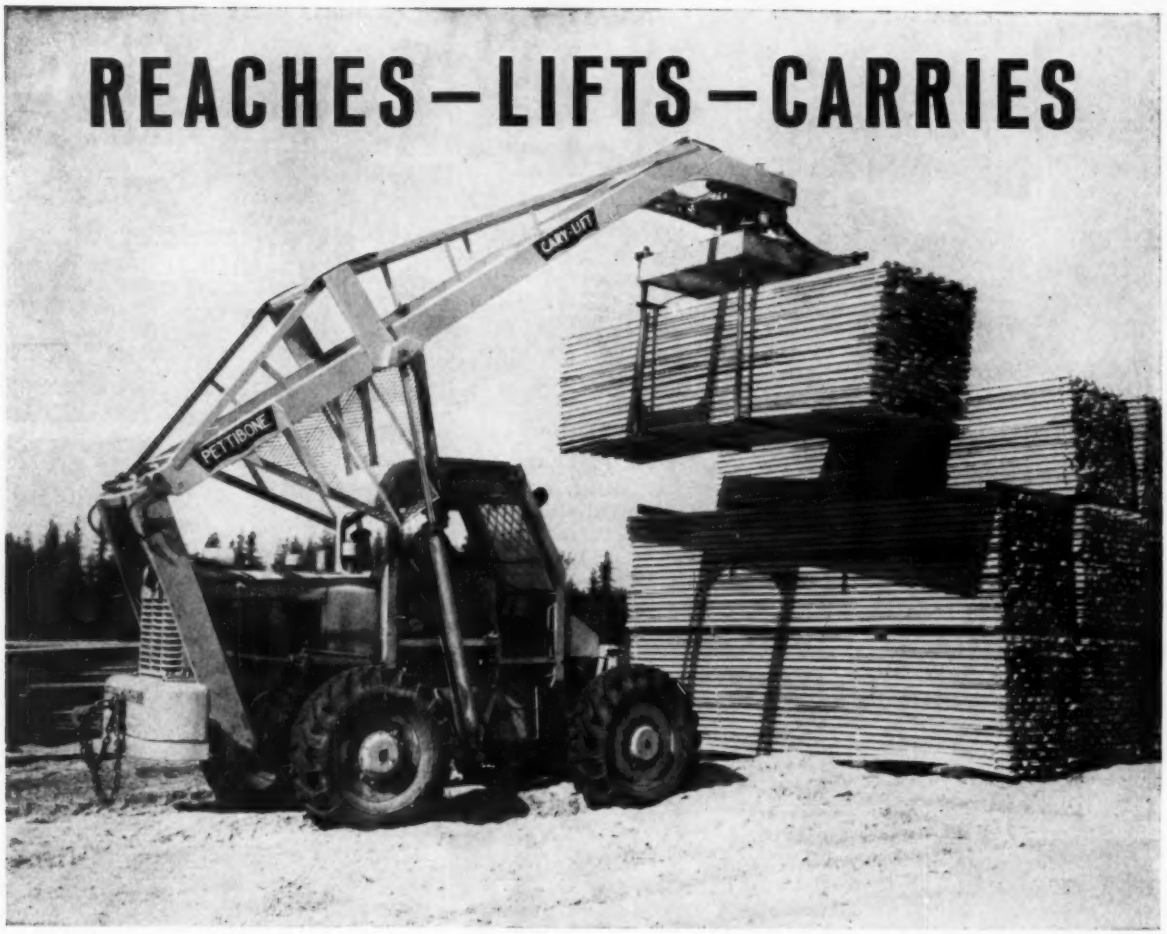
IRON WORKS

In Canada: CANADIAN SUMNER IRON WORKS, LTD., Vancouver

DESIGNERS AND BUILDERS OF MACHINERY FOR THE FOREST PRODUCTS INDUSTRIES.

United States Distributors: FRED E. BARNETT CO. . . . 5 offices in California and Oregon . . . WILCO MACHINE WORKS, INC. . . . Memphis, Tennessee . . . . . DILLON SUPPLY CO. . . . . Raleigh, North Carolina.

REACHES—LIFTS—CARRIES



Pettibone Cary-Lift Loader REPLACES TWO SPECIALIZED LOADERS

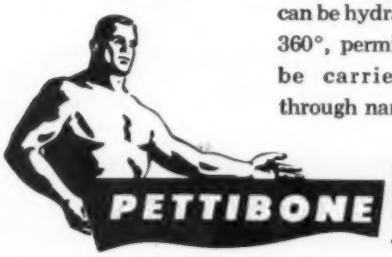
Handling time and labor costs both go tumbling when you use the PETTIBONE CARY-LIFT equipped with a lumber grapple to do the work formerly done by two machines. The PETTIBONE SUPER 15 CARY-LIFT equipped with a lumber grapple does the work of both straddle carriers and lift trucks when handling lumber from the sorting chain to storage areas and loading or unloading trucks or rail cars.

The CARY-LIFT'S unique lumber grapple attachment can be hydraulically rotated 360°, permitting lumber to be carried lengthwise through narrow aisles. This exclusive CARY-LIFT feature also allows lumber to be stacked without the loader having to be positioned squarely to the pile. Excessive maneuvering is eliminated and handling time is sharply reduced.

The lumber grapple can also be hydraulically extended four ft. forward to load or unload from one side of truck bodies or rail cars—giving another substantial saving in handling time.

Carrying capacities: grapple fully extended, 10,000 lbs.;
grapple retracted 15,000 lbs.

Write today for complete information on how the PETTIBONE CARY-LIFT *Loader can cut handling time and labor costs on your operation. There's no obligation, of course.*



PETTIBONE MULLIKEN CORPORATION

4700 W. DIVISION STREET • SPaulding 2-9300 • CHICAGO 51, ILLINOIS

the pay-off is in lower maintenance costs and less down time...!
YOU KNOW, TOM- I NEVER WOULD HAVE BELIEVED THERE COULD BE SUCH A DIFFERENCE IN MILL CHAINS.
YOUR NEW MOLINE CHAINS CERTAINLY MADE A BIG IMPROVEMENT, DIDN'T THEY?
YOU BET THEY DID! BEFORE I INSTALLED THEM, I WAS HAVING REAL TROUBLE WITH CONSTANT MAINTENANCE ON THE LOG HAUL AND CHAIN CONVEYORS. DOWN TIME CUT A BIG SLICE OUT OF PRODUCTION!
TRIPLE TESTING SOLD ME, JOE. YOU CAN'T BEAT MOLINE FOR QUALITY.
BUT I REMEMBERED WHAT YOU TOLD ME ABOUT MOLINE CHAINS AND HOW THEY'RE TRIPLE-TESTED TO MAKE SURE OF RELIABILITY AND MORE SERVICE.
Moline Combination-type mill chain
Moline H-type mill chain
AND YOU WERE SO RIGHT ABOUT MOLINE CHAINS BEING CLEANER. THEY'RE SMOOTHER AND QUIETER AND SINCE WE INSTALLED THEM EVERYTHING IN THE MILL SEEMS TO RUN BETTER.
YES, THAT'S THE DIFFERENCE THAT PAYS OFF! I KNOW PRODUCTION IN OUR MILL HAS INCREASED TREMENDOUSLY. YOURS WILL, TOO, THANKS TO MOLINE!

For every handling job in mill production

More than 60 years of service to the lumber industry has established the superiority of Moline chains. They are triple-tested... each link is hand inspected and gauged...assembled and "run in"... stressed to proof strength and shock tested for soundness, to give maximum efficiency and long service life in any pulp, paper or saw mill application.

You'll get quick service from your Moline distributor. Call him now!

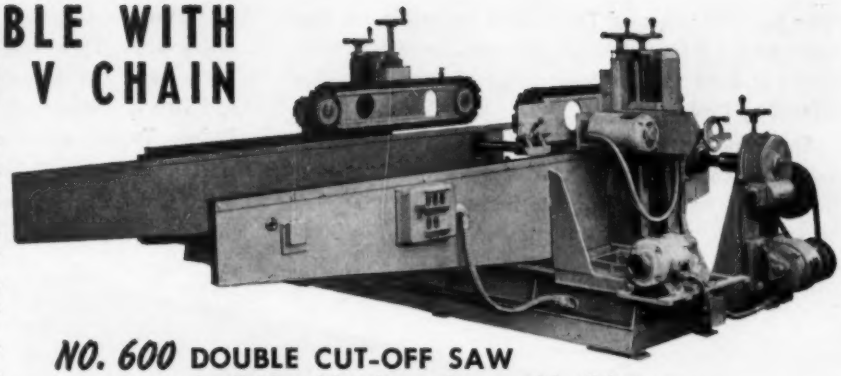
Moline Chains

MOLINE MALLEABLE IRON CO., St. Charles, Illinois

Specializing in the manufacture of chains

NOW AVAILABLE WITH NEW DOUBLE V CHAIN

These new Mereen-Johnson double end machines are priced well within reach of most furniture, sash and door and allied plants. They have the quality and workmanship of the heavy duty units but, through the elimination of less essential features, are *much lower in price.*



NO. 600 **DOUBLE CUT-OFF SAW**
Available with trims only; or with tilting cope motors and stationary dado arbor. Special attachments are available as optional equipment.

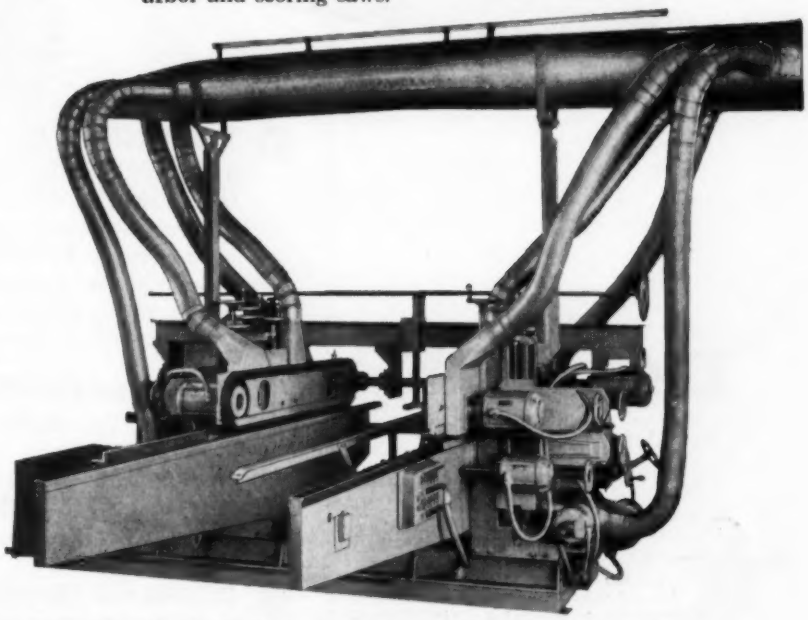
TWO NEW MEREEN-JOHNSON DOUBLE END MACHINES . . .

priced right for small and medium sized plants

NO. 700 **DOUBLE END TENONER**
Comes standard with trim, tenon and cope motors. Can be furnished with overhead dado arbor and scoring saws.

The basic construction for both machines includes a welded steel base, chain beams and hold-downs. More compact, they afford easy access to adjustments—minimizing shutdown time for set-up changes. Both units are fully motorized and are completely modern in every respect.

For complete specifications, write for illustrated bulletin No. 600-700



MEREEN-JOHNSON MACHINE CO.

4401 LYNDALE AVE. NO. • MINNEAPOLIS 12, MINNESOTA

CUT-OFF SAWS	DOUBLE CUT-OFF SAWS	MULTIPLE CUT-OFF SAWS	GANG RIP SAWS
TENONERS	VENEER & PLYWOOD SIZERS & JOINTERS		RESAWS

The big advantages of Taper-Lock mounting are now available for practically all of your sprocket installations. Below is listed the new wide range of types and sizes offered by Dodge!

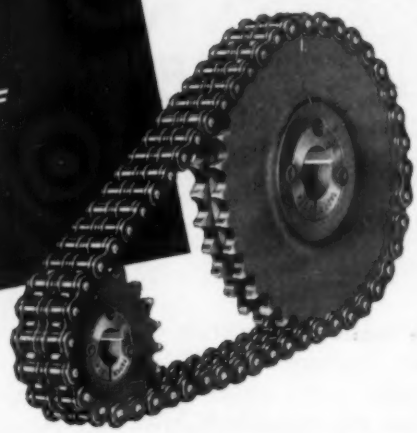
This important expansion of the Dodge line is the result of the enormous popularity of the Taper-Lock idea. Taper-Lock Sprockets are *modern*. Industry likes them because they go straight from shelf to shaft without machining—saving time. They are "easy on—easy off"—saving work. Their bushings can be re-used, not only in replacement sprockets, but in sprockets of different sizes and also in Taper-Lock Sheaves, Couplings, Conveyor Pulleys. Taper-Lock saves inventory—and money!

Dodge Taper-Lock Sprockets and Dodge Roller Chain are available through your local Dodge Distributor. Call him. Or write us for bulletin.

TAPER-LOCK®

ROLLER CHAIN DRIVES ARE NOW AVAILABLE IN A NEW WIDE RANGE OF TYPES AND SIZES

No Reboring!
No Keyseating!
No Waiting!



DODGE
of Mishawaka, Ind.

CALL THE TRANSMISSIONEER — your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look in the *white* pages of your telephone directory for "Dodge Transmissioneer."

- ***DOUBLE PITCH CHAIN and SPROCKETS***
  Transmission Series (No. 2040 to 2080) and Conveyor Series (No. 2040 to 2100). Sprockets to 112 teeth—including, for the first time, stock sprockets of 17, 19, 21, 23, 25 and 35 teeth *made especially for double pitch chain*. Introduced by Dodge, these sprockets are designed for even distribution of tooth engagement and absolute accuracy of mesh. Wear is reduced by half. Life of chain and sprocket is doubled!
- ***PLATE SPROCKETS***
  Steel Plate, Type A. No. 35 to 120. Mandrel bore, bored-to-size or Taper-Lock.
- ***SINGLE STRAND CHAIN and SPROCKETS***
  No. 35 to 160. Sprockets to 112 teeth.
- ***DOUBLE STRAND CHAIN and SPROCKETS***
  No. 35-2 to 80-2. Sprockets to 112 teeth.
- ***STANDARD ATTACHMENTS***

ALL TO ASA STANDARDS

DODGE MANUFACTURING CORPORATION, 900 Union Street, Mishawaka, Indiana

TRIAL SAMPLES

of World-Famous WHITMORE'S LUBRICANTS Now in Spray-On-Cans and Cartridges!

WHITMORE'S WIRE ROPE SPRAY INCREASES WIRE ROPE LIFE UP TO 300%

Exclusive formulas for lubricating and protecting wire rope, chain, springs. Penetrates to the core of wire rope minimizing internal friction and increasing usable life up to 300%—special protective qualities absolutely eliminate internal and external corrosion—non-gumming qualities reduce "carry-back"—packaged in handy 16 oz. aerosol spray-on containers or in bulk containers—send for a free trial sample.

WHITMORE'S LIQUID GEAR COMPOSITIONS ELIMINATE METAL TO METAL CONTACT

For open gears, dipper sticks, cams and sliding surfaces—exclusive formulas eliminate metal-to-metal contact, keep wear on the lubricant not the metal—no breakdown even after prolonged use under water—available for every climatic condition—packaged in handy 16-oz. aerosol spray-on containers or in bulk containers—send for a free trial sample.

WHITMORE'S ANTI-FRICTION COMPOSITIONS HAVE NO MELTING OR DROPPING POINT

Packaged in 14½ oz. cartridges for handy application with lever-type cartridge guns for constant protection to roller, ball, sleeve bearings and sliding surfaces in "hot" bearing applications or in areas with high ambient heat. Exclusive formulas have no melting or dropping point; moisture resistant; will not wash out; exceptional metal adherence properties; temperature reducing qualities; extreme pressure values. Available in two grades. Whitmore's Anti-Friction Composition No. 1 (light density), recommended for high speed, high temperature applications. Anti-Friction Composition No. 2 (heavier density), for low speed high temperature applications or loosely-fitted bearings. Specify No. when requesting free trial sample.

65 YEARS OF LEADERSHIP LUBRICATING THE FOLLOWING:

- Open Gears, Dipper Sticks, Cams
- Enclosed Gear Cases
- Wire Rope and Cable
- Hydraulic Units, Torque Converters
- Roller, Ball, and Sleeve Bearings
- Speed Reducers

The Whitmore Mfg. Co.
LUBRICATING ENGINEERS
CLEVELAND 4, OHIO, U.S.A.
PHONE VUlcan 3-7272

The Whitmore Mfg. Co., Cleveland 4, Ohio

Please send me free TRIAL SAMPLES of the following:

- ☐ WIRE ROPE SPRAY
- ☐ LIQUID GEAR COMPOSITION
- ☐ ANTI-FRICTION COMPOSITION NO. 1
- ☐ ANTI-FRICTION COMPOSITION NO. 2

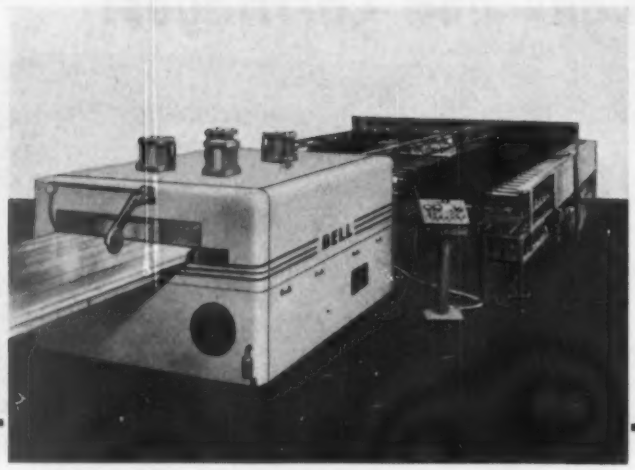
NAME_____ TITLE_____

COMPANY_____

ADDRESS_____

the new improved

BELL "300"



BOOSTS YOUR FINGER-JOINTING PROFITS

- **Glues Panels 8' to 24' Long Using Finger-Jointed Stock.**
- **Speeds Up Panel Gluing in Lumber Re-manufacturing Operations.**
- **Cuts Costs Drastically. Saves Space, Manpower, and Time.**

The Bell "300" shatters the barriers that have limited automated edge-gluing. It opens the door to new applications and new profits for any plant that produces panels in quantity.

Stock is fed through a vertical glue roller, assembled on a pre-layup table, moved to the infeed section, and pushed into the press with a motor-driven ram. Curing is done in 100 in. sections with available side pressure of over 600 lbs. P.S.I.

All parts—including generator—are designed as a single integrated unit and completely built by Bell—ONE UNIT—ONE COMPANY—ONE RESPONSIBILITY.

The "300" arrives ready for immediate and quick installation.

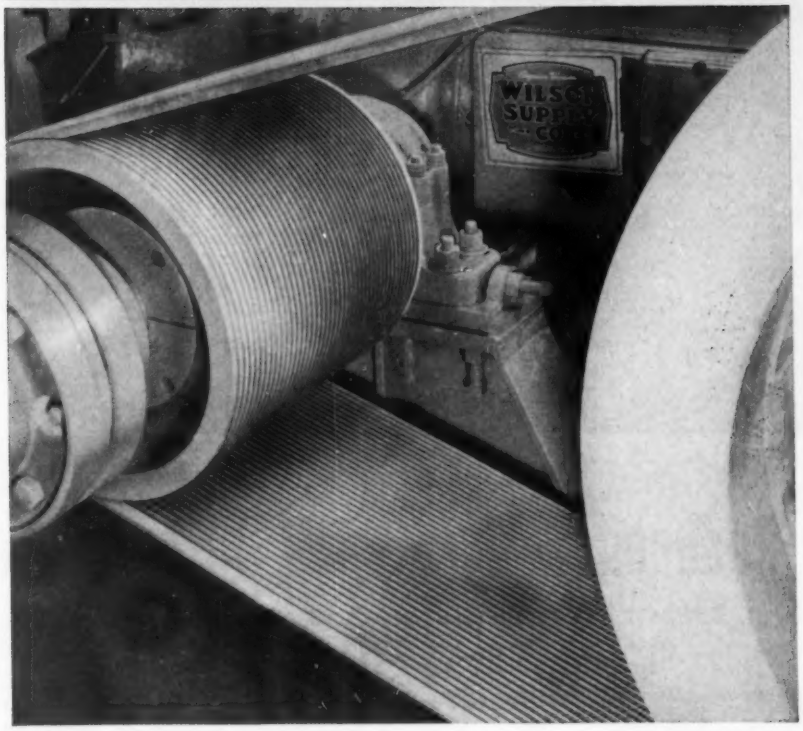
For Information Write:

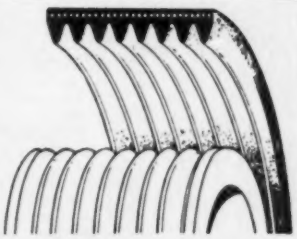
Bell WOODWORKING MACHINERY

123 JACKSON DRIVE
OSHKOSH, WISCONSIN

When you change drives...
Don't Settle for *Less* than the BEST

CONVERT TO RELIABLE R/M POLY-V® DRIVE!

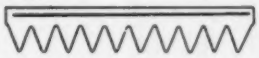




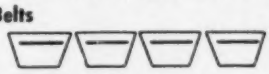
● **ELIMINATES "MATCHING" PROBLEMS**

A SINGLE UNIT across full width of sheave—NOT an assembly of SEVERAL V-BELTS

Poly-V



V-Belts



● **MORE UNIFORM POWER**
● **IN LESS SPACE**

Uninterrupted strength member full width of sheave provides higher horsepower capacity with less stretch —in less space.

● **MAINTAINS GROOVE SHAPE**
● **COMPLETE CONTACT-PRESSURE**
● **MORE CONSTANT SPEED RATIO**

Sheave grooves do not wear out of shape. Full and complete contact-pressure of rubber-to-sheave maintains groove profile. Maintains constant pitch and speed ratio.

..."MORE USE PER DOLLAR"

This gas compressor drive was rough on V-belts . . . until Wilson Supply Company installed trouble-proof R/M Poly-V Drives on all 200 HP units. Today, R/M's patented, space-saving transmission drive assures a degree of power-packed performance and dependability not possible with any available V-belt drive!

Major causes of V-drive trouble are engineered *out* of Poly-V Drive. It features a single unit, V-ribbed belt—*not* an assembly of V-belts that become unmatched and prevent complete power delivery. Full contact between Poly-V Belt ribs and specially designed sheave grooves keeps belt position constant . . . maintains groove shape and profile regardless of wear—with less wear on belt and sheaves even under toughest drive conditions! Speed ratio is unchanged. And because Poly-V Belt has uniform, uninterrupted strength member across the sheaves, Poly-V Drive will reliably deliver up to 50% *more* power in the same space as a multiple belt drive—or equal power in as little as ⅔ the space!

Let an R/M representative show you how Poly-V* Drive can give you more power delivery, more drive dependability . . . "More Use per Dollar" than the drive you now use. Just two cross sections of Poly-V Belt meet every heavy duty power requirement. Write for Bulletin M141DE.

WHEN YOU CHANGE DRIVES...CONVERT TO R/M POLY-V DRIVE AND BE SURE!

*Poly-V is a registered Raybestos-Manhattan trademark.

RM-954

BELTS • HOSE • ROLL COVERINGS • TANK LININGS • INDUSTRIAL RUBBER SPECIALTIES

MANHATTAN RUBBER DIVISION — PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.

Other R/M products: Abrasive and Diamond Wheels • Brake Blocks and Linings • Clutch Facings • Asbestos Textiles • Mechanical Packings • Engineered Plastics • Sintered Metal Products • Industrial Adhesives • Laundry Pads and Covers • Bowling Balls

Carriage Travel Reduced through relocation of sawyer from beside saw to feed side of deck. Improved safety and visibility resulted.

Sawyer's booth contains: mechanical-coupled niggers and dogs and selectric setworks. His station is guarded by an eight-foot wide semi-circular cage of ¼-inch boiler plate.

Increased sawing efficiency has been gained through a 7½% decrease of carriage travel distance and time in an experimental move of the sawyer from his former station beside the saw to the feed side of the deck.

The experiment, made by Weyerhaeuser Timber Co., Springfield, Ore., on its double-cut pony side reduced travel by four feet on each one-way carriage trip. The carriage accommodates 24-foot cants, but most production is in 16-foot lengths.

In addition to the conservation of carriage travel, the sawyer is in a safer working spot as well as one of better visibility. He has a better view of the deck and the cants coming up to be sawn. Increased fluorescent lighting floods the deck for added visibility.

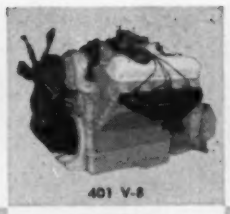
Increased sawyer efficiency is possible in that his working area is confined directly in front instead of over a full 180 degrees from one side of the carriage travel to the other.

The sawyer's new location is about 32 feet from the feed side of the saw.

The double cut bandmill is a Filer & Stowell 8-foot unit. The carriage has a shotgun feed.

534 V-8

477 V-8

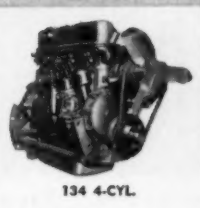

401 V-8

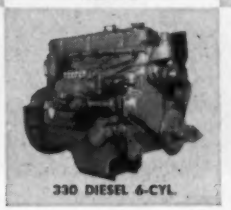
332 V-8

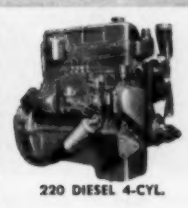
272 V-8

223 6-CYL.

172 4-CYL.


134 4-CYL.


330 DIESEL 6-CYL.


220 DIESEL 4-CYL.

NOW...TEN FORD INDUSTRIAL ENGINES TO MEET YOUR POWER NEEDS!

Whatever your application, consider the many advantages you get with a Ford Industrial Engine.

Completely modern throughout, all Ford engines have Short Stroke design for increased operating economy . . . overhead-valve construction for quick, easy servicing . . . and provide more horsepower per pound of engine weight than ever before possible. To cut costs on *big* jobs, Ford offers 3 new Super Heavy Duty V-8's with totally new lubrication-, cooling-, and fuel-systems.

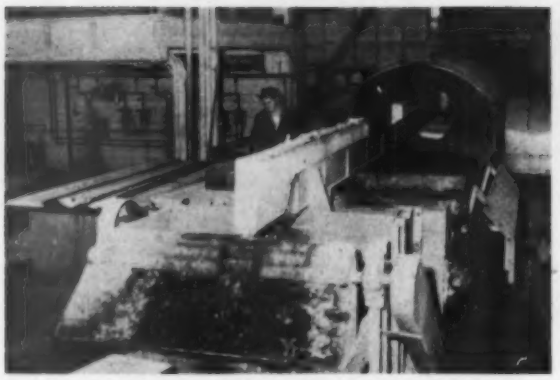
Ford Industrial Engines range from 134 to 534 cubic inches . . . including two Diesels. All are available as engine assemblies or power units, and can be fitted with Ford-approved attachments such as SAE housings, torque converters, transmissions and other equipment for special operating needs.

What's more, Ford users enjoy a minimum of downtime because there's always a Ford Dealer nearby with a complete stock of the more commonly purchased replacement parts. Yours at low Ford prices.

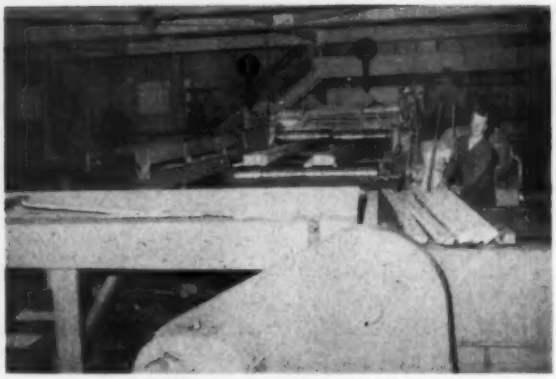
Get the *right* power for your application. Check Ford's full line of 4-, 6-, and V-8-cylinder engines soon.

INDUSTRIAL ENGINE DEPARTMENT • FORD Division of FORD MOTOR COMPANY
P. O. Box 598, Dearborn, Michigan

YOUR JOB IS WELL-POWERED WHEN IT'S FORD-POWERED!



Outfeed end of Scragg mill shows automatic offbearing arrangement. Two inside saws have permanent 4-inch spacing; outside saws can be set at 2- or 4-inch spacing by hydraulic setworks. Slabs feed to left from both sides of steel guide. Center cants proceed straight ahead.



Two edging machines are employed. Local-built "bolter" (1) accepts slabs from Scragg mill. The 54-inch Schurman edger (2) takes 4-inch Scragg cut cants, converts them to 2x4's. It has two banks of saws: 9 saws 2 inches apart, 5 saws 4 inches apart. Pushbutton controls are air-activated.

2x4 Plant Handles Small Logs Profitably with

semi-automatic scragg and planing mills housed under one roof. Pushbutton sorting and stacking simplify lumber handling.

Semi-atuomatic handling has been developed to a fine degree in a new plant devoted to manufacture of a single product.

Mechanical aids are important factors in maintaining a uniform output of 90,000 board feet of 2x4's daily in the new mill of J. Neils Lumber Co., division of St. Regis Paper Co., at Libby, Mont. It is a two-story mill with the sawmill on the second floor and the remanufacturing department on the ground level.

A basic reason for the mill is to obtain more complete utilization of available timber supply. Much of the company's timber is in small diameter stumpage. Also, beetle infestations in recent years have placed even more small logs on the market.

Much of this small timber has gone to Neil's main sawmill at Libby. But it was too costly to process profitably through machines designed to handle average diameter logs.

An efficient outlet for the small timber was needed because its value had increased sufficiently to justify a separate logging program and a separate mill. Logging manager George Neils, now acting as a consultant, provided it with the new mill.

Logs for the new plant range from 6 to 20 inches with the majority 10 to 15 inches. All are handled smoothly in the new small log "package" operation which contains its own production, yard, finish, storage and carloading facilities under one roof.

Good recovery is even being made from reject studs selected off the chain at the finish trimmer. Short lengths and

Electrical Innovations

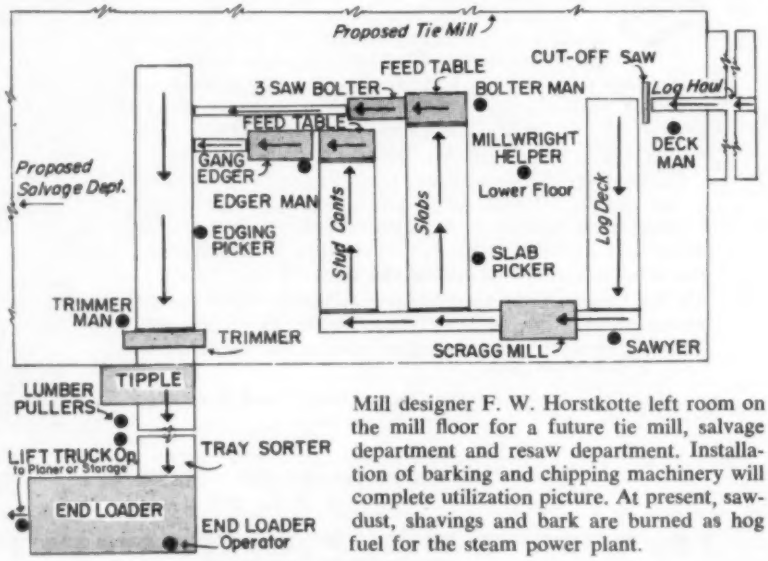
Many modern ideas in motors, controls, switchgear and lighting are included. Total horsepower in the plant (counting all motors from 1 to 150 hp) is 1308.5 hp.

Gearmotors are used on various drives, equipped with electric brakes. These units take little space, require little maintenance and can be easily replaced in case of malfunction.

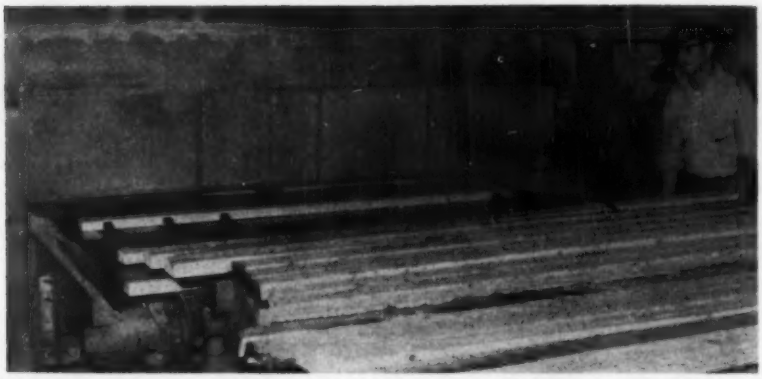
All motors are 440 volt. Cut-off saw is powered by a 40-hp induction motor. Scragg mill drive consists of two 150-hp, 1200 rpm induction motors.

There are three main power centers for the mill: for the stud mill, sorter and planer.

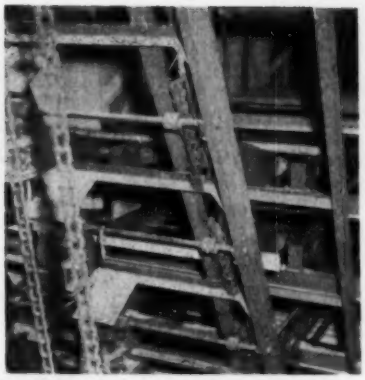
Westinghouse DyNac brake is used on chain ahead of the trimmer to save motor burnouts. Limit switches are used extensively through the mill.



Mill designer F. W. Horstkotte left room on the mill floor for a future tie mill, salvage department and resaw department. Installation of barking and chipping machinery will complete utilization picture. At present, sawdust, shavings and bark are burned as hog fuel for the steam power plant.



Special Irvington stud trimmer mounts four saws. It can produce 6, 7 and 8-foot, 2-inch studs. The 6- and 7-foot pieces raise together when not sawing. An electric solenoid activates the control on Irvington's latest type mechanical saw lifter. Operator puts "intelligence" into each trimmer lug space so that memory device will deliver the stud to the proper tray on the automatic sorter.



Ladder-type tipple moves studs from chain onto one of the three trays of the green chain. It is a Moore Dry Kiln Co. unit. Transfer is gate which allows studs to slide onto green chain.

1-inch boards are recovered for 1x2-inch stickers, 1x3-inch strips, 1x4-inch lumber for crating and grain doors and for 2x4's down to 4-foot lengths for special orders.

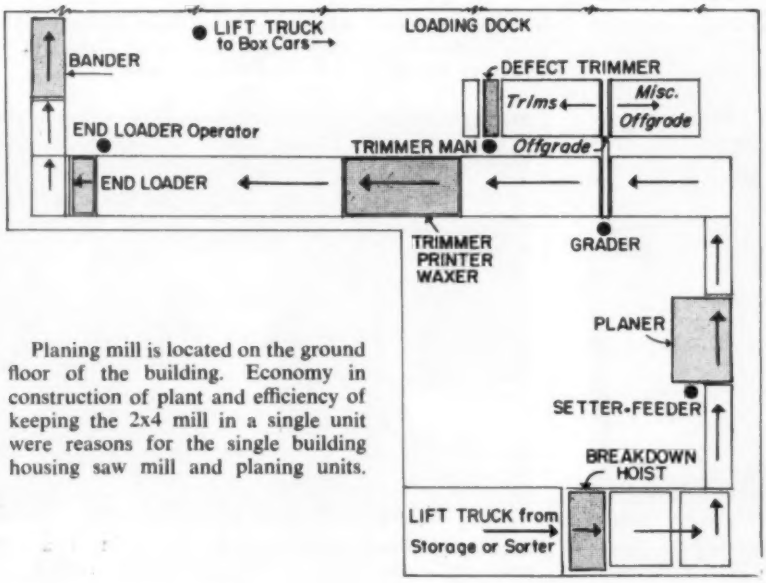
AUXILIARY EQUIPMENT

MINNEAPOLIS-HONEYWELL Micro-Switches.

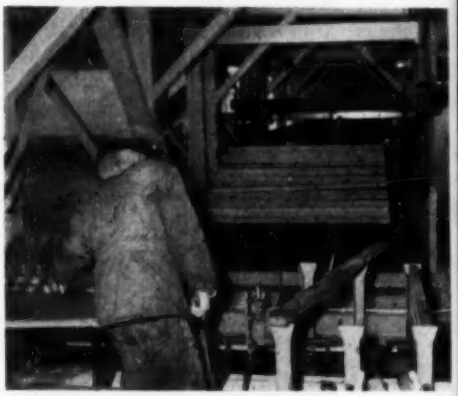
WESTINGHOUSE limit switches, power and control centers, electric motors, Gearmotors, mercury vapor lighting, Dynac brakes, Moto-cylinder evener on stacker.

GENERAL ELECTRIC limit switches, controls; SQUARE D foot controls; LOUIS ALLIS electric motors; STEARNS electric brakes; CHAIN-BELT chain; DODGE OF MISHAWAKA transmission equipment; LINK-BELT chain; AMERICAN SHEET METAL duct work; PEORIA chain; CHAPMAN Seal-Tite end coating; WARNER electric brakes; U. S. electric motors.

Sorting is by species. White fir goes to the top tray, larch into the middle tray and Douglas fir into the bottom tray. The Moore sorting tray chain is approximately 100 feet long. Off-grade salvage stock and 6- and 7-foot 2x4's are pulled by hand from the green chain transfer.



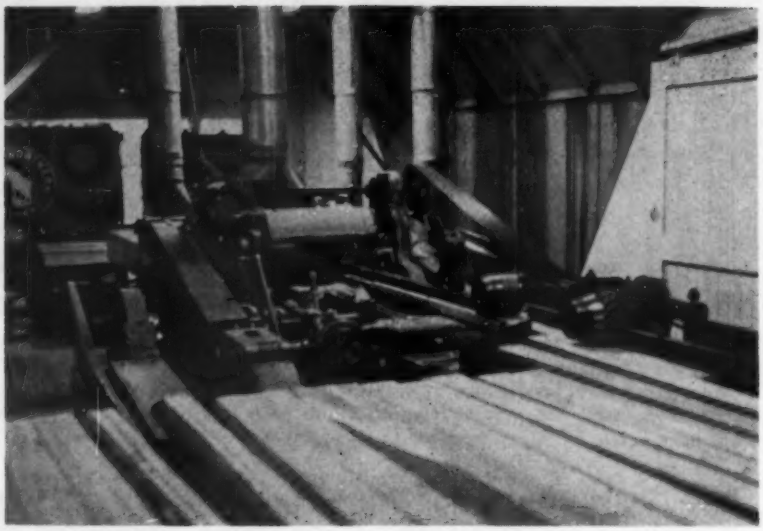
Planing mill is located on the ground floor of the building. Economy in construction of plant and efficiency of keeping the 2x4 mill in a single unit were reasons for the single building housing saw mill and planing units.



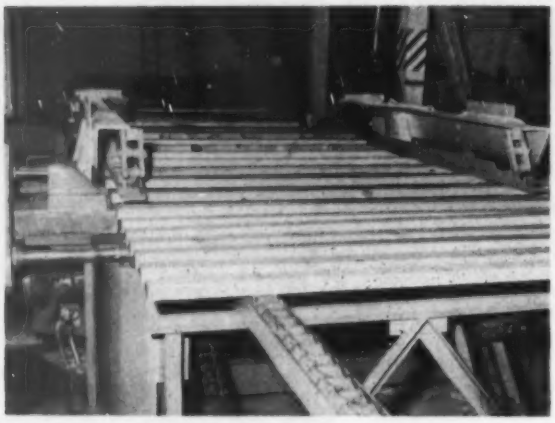
End-loader features a decline from green sorting trays. Studs feed into stacker and as load is built up, it is moved off to the left by power rolls and then picked up by fork lift.

More J. NEILS next page

Studs move to Moore breakdown hoist by lift truck, are fed by live chains.



Automatic feeding is featured on this S. A. Woods 10-knife planer. It surfaces all studs in the flow in the ground floor portion of the mill building.



Stud trimmer requires no operator. Studs are first trimmed, then ends are printed and waxed. The Irvington trimmer can be adjusted to handle special cut-to-length stock.

Keystone dressed reloader automatically packages studs for loading by lift truck. Automatic sticker placer put two stickers between two predetermined courses.

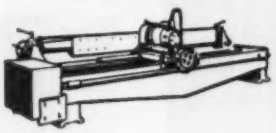
Package is banded by Signode Steel Strapping Co. power machine and placed in warehouse storage to wait shipment.

Loading facilities are all covered. Carloading area is located adjacent to finish stacker and strapping station.

COE

VENEER MACHINERY

LATHES
CLIPPERS
DRYERS
KNIFE GRINDERS



The COE MFG. Co.
Painesville, Ohio

Li'l Irvie says:

GET MORE DISTANCE FROM YOUR DOLLAR WITH - - -

IRVINGTON QUALITY

Irvington

UNIT & PLANT AUTOMATION • MATERIAL FLOW LAYOUTS
SYSTEMS CONTROL • BRAND IDENTIFICATION & PROMOTION
END-SURFACING • GRADE & RETRIMMING
1808 N. E. 7th AVE., PORTLAND 12, OREGON • 3 COLFAX N. E., GRAND RAPIDS 5, MICHIGAN

PORTLAND CHAIN MANUFACTURING CO.

IN THE HEART OF THE LOGGING INDUSTRY

Manufacturers of

PORTALLOY
ENGINEERING CLASS CHAIN
H & C CLASS REFUSE
& PINTLE CHAIN
LONG LINK CONVEYOR

Conveyor Flights and Attachments

Decklashing — Boom Chains — Coil Chain

MAJOR DISTRIBUTORS IN YOUR AREA
CALL THEM FOR INFORMATION and SERVICE

"PORTALLOY is to chain as COPENHAGEN is to snooze"

PORTLAND CHAIN MANUFACTURING CO.

4000 N.W. Yeon • Portland, Oregon • CApitol 8-9219

Here's data on the New

DIAL HEAD AGASTAT®
time / delay / relays

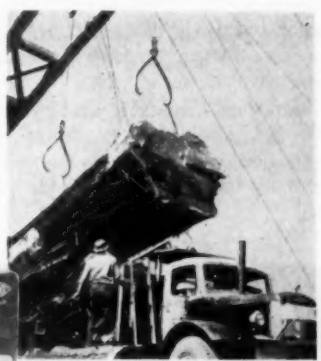
These relays have recently been re-designed—improved in performance *and* appearance. So you'll want up-to-date specs.

This free folder gives complete details on all models. In it you'll find operating specs, timing ranges, contact capacities, dimensions, diagrams of contact and terminal arrangements, and data on mounting and installation accessories.

For your copy, write: Dept. A34-936.

AGA ELASTIC STOP NUT CORPORATION OF AMERICA
Elizabeth, New Jersey

GONSET
CITIZENS BAND
2-WAY
RADIO
For new operating economies!



New Citizens Band recently allocated by FCC now makes possible low-cost 2-way radio for virtually unlimited business or private use. No license exam, U.S. Citizens merely complete simple FCC form.

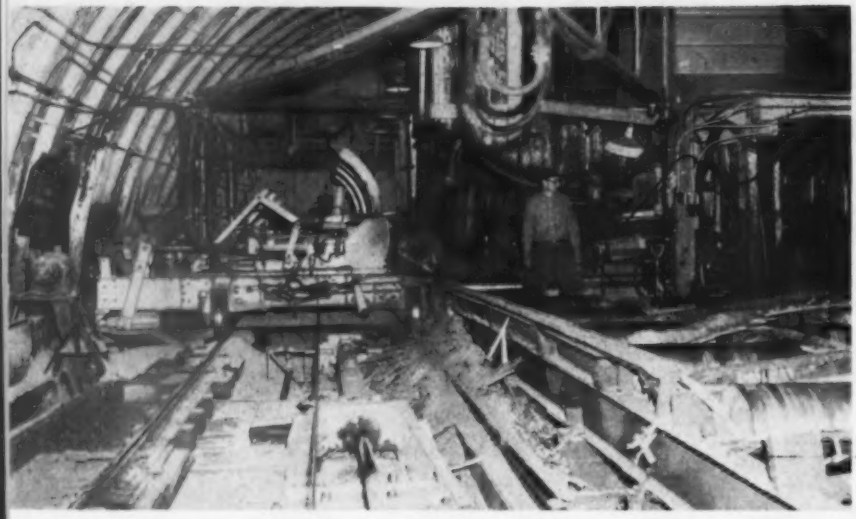
Now . . . coordinate all your logging and yard operations—simply and quickly with G-11 2-way radio. Compact—easy to operate—rugged—reliable. Use on tractors, graders, trucks, jeeps, boats, planes, in the field or in control buildings. Puts you instantly in contact with your vehicles and working areas. For routine—for emergency.

G-11 employs latest electronic design techniques. No tuning—is fully crystal controlled for highest stability. Has noise limiter, "squelch" for muted standby, simple press-to-talk operation. Three models: 6V DC, 12V DC, 115V AC. Price includes press-to-talk microphone and crystals for one channel.

124.50 PER UNIT

Write today for free brochure and booklet, "11-meter Citizens' Band Radio"

GONSET
GONSET
Division of Young Spring & Wire Corporation
801 SOUTH MAIN STREET, BURBANK, CALIF.



60-inch opening carriage serving the 9-foot Filer & Stowell band saw is a company-built, three-block unit weighing but 12,000 pounds. It is made of 15-inch I-beam structural steel. It will support 100,000 pounds per block. An example of weight reduction is use of short axles weighing but 35 pounds each. Carriage is all air-operated except for electric controls on the air-operated setworks. Blocks are screw-operated with self-aligning screws mounted in center of the knees above the head blocks. The carriage feed is a hydraulic unit employing Oilgear pumps providing 2500 psi pressure and 150 connected horsepower. A short, ¾-second overload on carriage reversal provides initial acceleration for fast carriage action—up to 1000 feet per minute.

Control panel for sawyer shows buttons: 10's in left row, units in center and fractions at right. To make set, sawyer merely presses buttons adding up to set he requires, similar to the use of an adding machine. He then punches action button to activate set. A total of 480 combinations are possible. The carriage feed control is at the right.

5 Men Produce 90,000 Feet Daily of dimension lumber

in highly automated band mill of C&D Lumber Co. in Riddle, Ore.

Here's the manpower setup:

1. A pondman rafts logs to the sidelift entering the plant. He works logs for both the band mill and the gang mill.

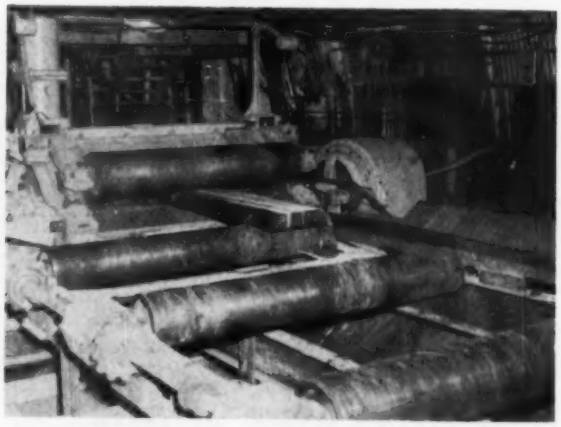
2. The deck sawyer operates the sidelift, bucks logs to length and transfers them to the saw deck.

3. The sawyer loads and saws the logs.

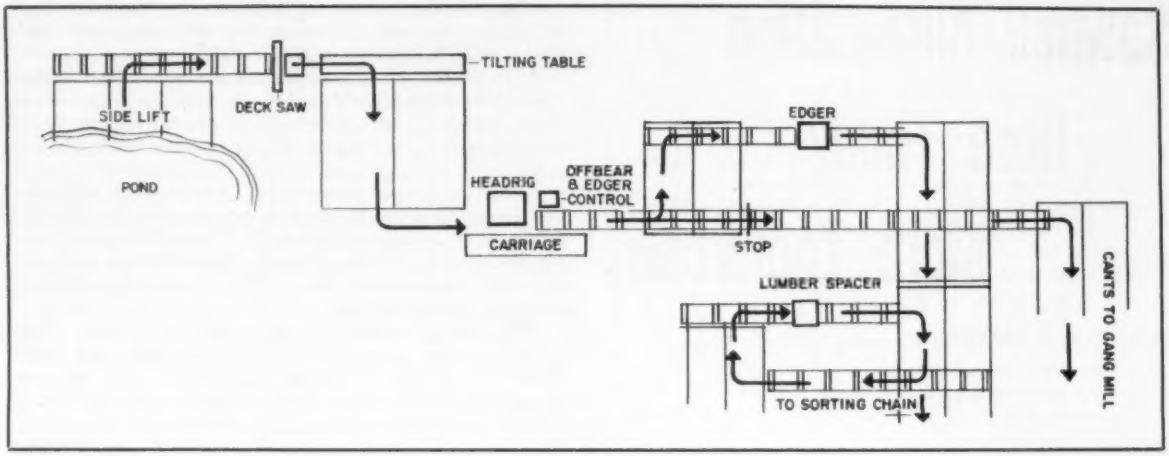
4. The tail sawyer-edgerman offbears and sets the edger.

5. A lumber straightener straightens the lumber as it leaves the mill for the resaw and sorting chain.

Edgerman-tail sawyer remotely controls edger from his station at off-end of saw. He sets up his saws as the cant leaves his rollcase. By actuating jump-chains in the transfer table at bottom he routes cants to pre-set edger, or he can send them straight down main rollcase to gang mill.



Edger's offbear side shows edged cant coming through Sumner 12x72-inch four-saw edger which is powered by GE 300-hp motor. Cants come across from headrig to feed table where a straight edge assures their feeding squarely into edger. Automatic press rolls take over feed.



The machinery division of C&D Lumber designed the special equipment used in the sawmill.

Biggest labor saver is the remote control setworks which makes edging entirely automatic. The tail sawyer sets the edger for the next cant as he offbears it from the headrig.

To check carriage speed, sawmill superintendent B. T. Randall employs an ingenious method of laying a long strip of adding machine tape on the head blocks and mounting a magneto driven by a 1750-rpm motor on the carriage. A "cats whisker" electrode on the magneto bears on and arcs through the tape twice on each revolution of the motor, burning a hole in the paper.

As the tape is stationary and the carriage moves, the distance of travel may be directly measured between each hole for 1/3500 of a minute. Top speed and acceleration may be readily determined at any point in the carriage travel.

The C&D carriage setworks is an air - powered electric - controlled unit. Sets are locked at the time of the cut, assuring metal-to-metal accuracy. A red light on the sawyer's console shows when the blocks are briefly in motion as a set is made. When the set is completed, the light goes out notifying the sawyer he can start his cut.

The mill will handle a maximum length of 26 feet with mostly upper grades of dimension cut, such crossarms and small high grade posts and timbers. The 9-foot Filer & Stowell headrig also cants for the 30-inch Esterer gang. Cants for the gang go down the main offbear rollcase to a transfer to the gang. Gang mill production is 70,000 board feet daily.

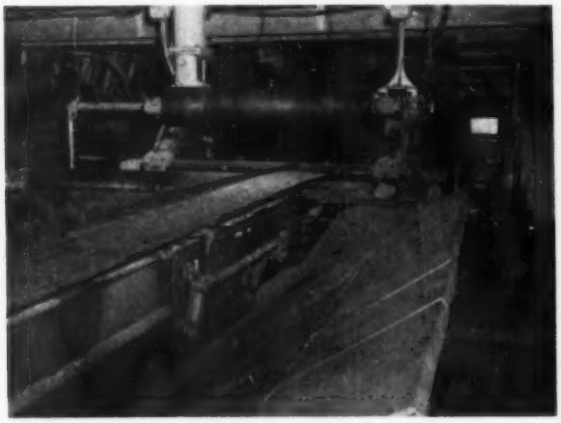
Untrimmed lumber from the mill goes to the resaw merry-go-round and then on to the sorting chain used for both the band mill and gang mill. All trimming is done at the planer.

Resaw is a 7-foot Prescott band controlled by C&D setworks. Press rolls are also pushbutton-controlled. In normal operation . . . on standard cants . . . the operator sets the press roll to the cant being run and the set roll to the desired cut.

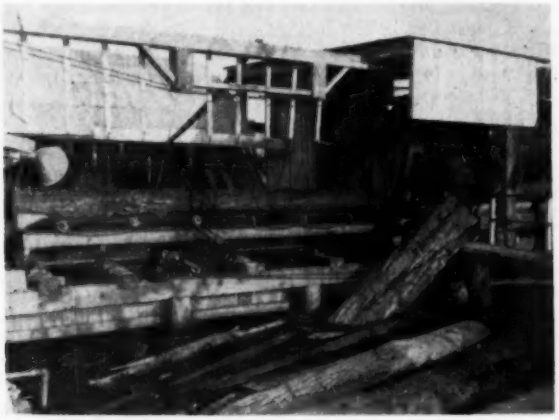
The press roll follows the set roll, electrically-controlled, and maintains the proper opening and press for the cant being resawed, regardless of the saw line. A lever is provided for press roll control on slabs and wedges.

A lumber spacer ahead of the puller for the resaw merry-go-round puller automatically releases a board every three feet. If the back end of the mill should be down temporarily, the headrig can continue to saw and fill the storage area.

When the operations are resumed, the lumber is released automatically with the same three-foot spacing between boards.



Automatic edging picker is an air-cylinder-powered tray which is actuated by the press rolls on the edger. The unit drops near-edging down the burner conveyor at the bottom. Edgings on the other side of the unit are picked up by the lumber straightener.



Bucking is done on deck with logs that come up a sidelift. The sidelift is operated by the decksawyer. After logs are bucked to length the decksawyer transfers them to a tilting rollcase at left which tilts them into the live deck serving the carriage.

Sawmill Automation Here Today... ...More Tomorrow

By MILTON H. MATER, president

Mater Machine Works, Inc., and senior partner in Mater Engineering, Corvallis, Ore.

Automation in the sawmill is the control of machines by other machines.

It is just beginning to make inroads into what has often been called the oldest industry on earth. While the high cost of timber, high wages and competition from metals, plastics and other construction and building materials accelerate, we can expect the sawmill automation to accelerate even more.

Sawmill automation permits reducing of manufacturing costs while cutting better grades of lumber. This is done by increasing the productivity of the workers and easing their physical labor so they can study and observe each piece more carefully before making the decision on handling.

However, it is obviously impossible and impractical to scrap all existing sawmills and start all over. The relatively small number of new mills being constructed each year are engineered on automation or mechanical aid principles whenever available capital permits.

Step-by-step automation is a practical solution. By a yearly allocation of money for sawmill improvement to be made during an annual shutdown, step-by-step modernizing makes good business sense. Many "packaged" machines are being developed gradually to make this approach practical.

Log handling functions have been developed with a high degree of automation, from the log pond, or source of logs, through the headrig. The mechanized log haul, live log storage deck, mechanized stop and loader and log turner are already installed in the deck of most mills. The mill which steps up from a manual operation to automation faces two steps. (1) Mechanization, the use of machines to do physical work; (2) automation, the control of these machines by other machines.

The fully automated log deck can be arranged so that the log is untouched by humans from the storage area until after it is sawn to pieces on the headrig. Such an automated deck contains built-in limit switch actuator which makes it possible for the log stop-and-loader to detect the presence of the logs, feeds back information to the log conveyor and prevents it from kicking more logs onto the deck when it is full.

When the sawyer presses a button to move the log from the stop-and-loader, the limit switch actuator "senses" its absence, and causes the deck motor to start, conveying a new log into position. The log turner is controlled by a modulating valve which permits the sawyer to have fine control of heavy equipment and logs.

The riderless carriage has become so completely accepted in recent years that the mill with doggers and setter riding the carriage is reaching near extinction. Techniques for rolling logs on the carriage, dogging, tapering, setting out and turning have also been perfected so the sawyer can easily handle them.

The automation carriage has a predetermined setworks, automatic lubrication, automatic safety devices and automatic backstand-settings.

The band mill built especially for sawmill automation is built so the sawyer can control strain, tilt and upper guide positioning by pressing buttons on his control console. It is also designed for a built-in slat bed for automatic offbearing. The circular saw husk for use in automated mills is built for ready disposal of the waste material from the carriage.

Automating the back end of the mill, from carriage off-bearing system to, but not including the lumber sorting system, is much more difficult in an existing sawmill. Here too, is where new mills which are designed according to old standards will fail in automation.

Major difficulty in automating the back end of the mill is lack of adequate waste cleaning conveyors. Slabs, bark, slivers and sawdust must be removed promptly or they soon foul up any mechanism. In many existing mills, the cost of constructing conveyors is too high to permit complete automation. Other mills may require only slight modifications for automation. All plans for new mills should be reviewed with waste disposal in mind.

The general rule for applying automation at the back end of the mill is: "Separate the waste material from the lumber as soon as possible." Modern sawmill design calls for leaving the floor under all lumber carrying rolls and transfers open, so sawdust and other refuse can fall through into conveyors.

Automatic headrig offbearing has to be designed to handle the irregular shaped pieces coming off the log. To eliminate need for an offbearer man to pull the slab sawn-face down on the offbearing rolls, a wide flat belt of rubber or fabric composition is used to carry away the slabs and

Here Are Areas in Which to Look for Advances in Automation

Better raw material analysis and segregation. Logs will be X-rayed for defects in many of the larger species and some hardwoods, so that a cutting cycle can be planned. Logs will be segregated within diameter limits, lengths, grades and species. This is necessary because automation is best applied to pieces of the same size and type.

Automatic log positioning equipment will include automatic log turning equipment which will dispense with the manual skill now required by the sawyer. He will press one button for a 90-degree turn, another for 180 degrees, etc. Tapering will be accomplished easily, without the jerked-out increments now used.

Programmed sawing cycle. In feedback automatic machines or machine systems there is automatic direction and regulation of the production process in accordance with a predetermined program. Such a system is entirely practical for sawing uniform raw materials, such as plywood cores which are cut into a uniform simple product such as studs. A program can be set up which governs entirely the sawing of logs.

Boards cut to a thousandth of an inch will be possible on carriages provided with information feed-back devices. Boards will be measured automatically and corrections applied automatically.

pieces. Slabs falling on the belt with the rounded side down do not hang up on a belt. In addition, on long log mills cutting heavy pieces, the success of automatic offbearing depends largely on the automatic synchronization of the speed of the belt with the speed of the log carriage. The off-bear belt is not only synchronized with the speed of the carriage, but also, when the piece falls off and the carriage direction is reversed, the belt automatically speeds up and cleans itself for the next piece.

Automating the edger and edger receiving and outfeed systems. The transfer from the offbearer to the edger feed table is a relatively simple operation which has been in use for many years.

Automating the edger itself is a newer process and the automated edger is still a rarity in most areas. The automated edger uses power drives to shift the saws and electrical controls to regulate the shifting.

The simple two-saw handwheel edger is readily automated by replacing the handwheel with a motor and brake and adding an electrical control unit which moves the saws to preset widths. The pre-set remote controlled edger has come into wider use in the southeastern region in the past year.

In more complicated edgers the problem of remote control is more difficult to solve. Automation Gang Saw Edgers are still expensive for small mills. Medium and larger producers, however, are finding that the larger investment in an automated edger pays for itself. Many more pieces can be run through the automation edger by cutting down dead time required for shifting the saws. The automation edger sets more accurately and, by freeing the edgerman of some of the physical labor, gives him more time to obtain the highest grade of lumber.

Edger tailing has been successfully automated by mechanical devices in conjunction with the use of the two-saw edgers or two-sided edgers which use only two saws on each side. These are found in the southeastern U. S. and other areas where mills saw only small timber to maximum width.

In larger sawmills automatic tailing must be built into the mill itself. The location of the waste conveyor is of paramount importance in automating the edging process.

The disposal of the edgings is a two part problem: (1) disposal of the short pieces, including slivers, knots, bark, sawdust, etc. (2) The disposal of the longer pieces.

The short pieces are dropped into conveyors running lengthwise under the edger and all outfeed roll cases are left open so that the pieces can fall through as they travel.

The long pieces are handled with the lumber and are rolled onto cross transfer chains. The cross chains are spaced as widely apart as practical for the lumber lengths sawn in the mill, and edgings which cannot bridge these lengths fall into the edger conveyor. Longer lengths go to the trimmer, where they may be disposed of either by dropping them into a conveyor full length, or, when it is not practical to install such a conveyor, the pieces can be slashed to 2′ or 4′ lengths on the multi-saw trimmer.

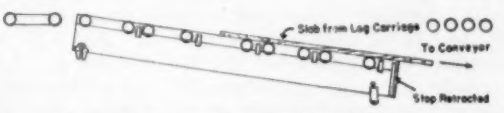
Automating the trimming function. Trimmers are automated to reduce the manual labor of trimming, speed up the operation, and give the trimmer man more time to observe and make decisions affecting the grade of the pieces which he is handling.

The two-saw trimmer is readily automated by motorizing the saw shifting mechanism. The saws are moved toward

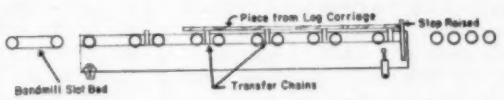
(Continued on next page)

Mater Automation Offbear Belt System

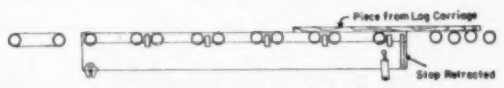
Belt is built on a self-supporting rigid framework which contains transfer chains to the edger. A stop at the end of the frame actuates the air cylinder which raises the transfer chains. Pieces which are to go to the edger are permitted to hit the stops and be transferred to the edger. When the sawyer saws off a slab which will go to the main conveyor under the mill, he presses a button which pivots the entire offbear belt framework to pivot down at the far end, and the slab is carried downward by the belt into the conveyor. A sawn piece that is to go straight to the trimmer is sent on its way by the sawyer, who pushes another button causing the stop to be pulled down out of the way. Diagrams below show how system works.



Function 1: Piece from log carriage strikes stop. Stop activates transfer chains. Piece is transferred to edger. Transfer chains retract below belt.



Function 2: Slab from carriage falls on belt. Step is retracted. Belt frame tilts. Piece is transferred to conveyor. Belt frame returns to level. Stop raises.



Function 3: Stop is retracted. Piece passes over stop to trimmer. Stop raises.

Automatic carriage feed. Feedback systems from the saw will control the speed of feed so that it is always optimum.

A sensing device on the band mill's upper guide will automatically keep the guide down, close to the log, but avoiding knots and limbs. This will permit faster, more accurate sawing by preventing the saw from dodging.

Automatic edgers. Automatic speed controls will be commonplace, for optimum feeding. Sawing shitfing will be motorized and fine width adjustments will be made automatically by the motors. This will be controlled by a width-measuring device which will monitor each piece.

Automation trimmer. Automatic end-trimmers will be the rule rather than the exception; speed of feeding will be varied automatically by thickness in many species.

Resaws and gangs. Advances will be made in automatic feeding and pushbutton setting. Automatic tailing devices will be developed; one man will handle the machine.

Automatic tally devices will make possible grading marking by pushing a button. Calculating machines will subtotal and total the entire mill production.

Sorting. The grader will push a button for each piece which will insure that it is delivered into the current bin (and tally as above). When a bin is filled, it will automatically discharge to conveying systems to a stacker.

Inventory control. Automatic warehousing methods will be applied, so that every stack is located and can be brought forward for breaking down or for shipment.

or away from each other by a motor which is controlled by cams and limit switches. In a more highly automated type one saw stays stationary while the other saw moves, permitting the maintenance of a "zero lumberline" to the trimmer.

Automation of the multi-saw trimmer is achieved by putting limit switches in the trim table, providing for automatic end trimming. Many samills end trim 80% or more of the lumber. This gives a single operator plenty of time to trim the rest of the remaining pieces for increased grade. In many high speed mills it enables one man to do the work formerly done by two.

The single-saw roll case trimmer may be automated by providing automatic stops in the rollcase and activating the trim saw by an air or hydraulic cylinder. In one installation the lumber length is automatically transmitted to a trimmerman's console; he then activates a movable stop which slides down the rollcase to its correct position while he trims the front end. This permits accurate trimming of pieces up to 40′ long in 6″ increments.

In the trimming operation, waste conveyors which carry away the trim ends and sawdust efficiently are essential to automatic functioning. The trimmed lumber must be carried away from the trimmer by cross chains, rolls, or belts to the sorting and pulling area quickly and smoothly. When a multi saw is used, it is often necessary to have a cross rollcase immediately behind the trimmer so the pieces that are cut in two or more parts may all be moved to the same zero lumber line.

Automating the lumber sorting function. While comparatively little research and development work has been done on automatic lumber sorters in the last five years or so semi-automatic sorters have become available. These attack the problem by the usual two different methods of sorting:

(1) The sorting or green chain method, in which the pieces are pulled from an endless chain lengthwise into lumber piles at right angles to the chain.

And (2) the rollcase method, in which the pieces move lengthwise on a rollcase and are removed sideways into lumber piles parallel to the rollcase.

The sorting chain method is automated by turning it into a multi-level storage chain. Men at one end sort the lumber onto the proper link chain. At the other end, any one of the chain levels can be raised to discharge onto a semi-automatic lumber stacker. As many as 26 sorts can be made with one of these sorters. In operations with many sorts, where each green chain man can only be expected to pull 10 to 15,000 bd. ft. per shift, the automatic green chain and stacker can make substantial savings. One mill using such a stacker produces over 80,000 per shift with only 4 men.

The endwise sorting system is automated by the "edge sorter." Lumber is sorted into slots built on rotating rolls or a moving belt. The lumber falls into the slot on one edge and rides lengthwise down the rolls. Each slot ends at its pocket—an open space at the side of the rollcase, sloped onto a set of skids on which the lumber falls. Two men pile the lumber from the skids into packages. The edge sorter often permits mills sawing 60,000 per shift or more to operate with two men instead of the four otherwise required.

Edge sorting has been most generally used for light and short lumber, up to 16′ or 20′, with comparatively few sorts, up to about 12. Although longer edge sorters have been built with more sorts, such high speeds are required that the operation of the machine is complicated.

Automatic stackers are also in a fairly new state of development and are found usually only in the largest mills. The automatic stacker operates by making a "course" in a package and a set of arms, which then withdraw, permitting the course to settle on the course below it or on stickers.

PACKAGED AUTOMATIC CONTROL SYSTEMS

Specialized controls for your requirements using:

- electric, electronic, hydraulic and pneumatic techniques
- standard controls for the lumber, plywood and particle board industry
- veneer clipper controls
- automatic resaw setworks
- additive proportioning system

controls and communications co.

1695 W. 1st Ave.
Eugene, Ore.
Phone Diamond 5-8561

LOVSTED'S
RAIL YARD
CAN SUPPLY
All Your Track Requirements
ON HAND FOR IMMEDIATE SHIPMENT

- Rails, 12 to 175 lbs.
- Tie Plates
- Spikes
- Angle Bars
- Track Bolts
- Ground Throws
- And Other Accessories

WE SELL FROGS AND SWITCHES

C. M. LOVSTED & CO., INC.
4000 W. Marginal Way, Seattle 6
Phone WEst 5-4000 SERVING THE PACIFIC COAST

You don't pay the man who isn't there

Engineered to Cut Costs

CORLEY
SAWMILL MACHINERY
CORLEY MANUFACTURING CO., CHATTANOOGA, TENN.

BURMESE STRAW PICTURE

By Appointment to His Maresty . . .

The TEAK OF BURMA

Those elephants are still a-pilin' teak in the Burma jungles just like Kipling rhymed years ago. BURMA TEAK—the best in the world—is the finest of woods, used where the highest quality is demanded. As an officially appointed representative of the Burma State Timber Board, we bring you that teak straight from the producers. Your inquiries are cabled direct to Burma for a fast quotation on your wants.

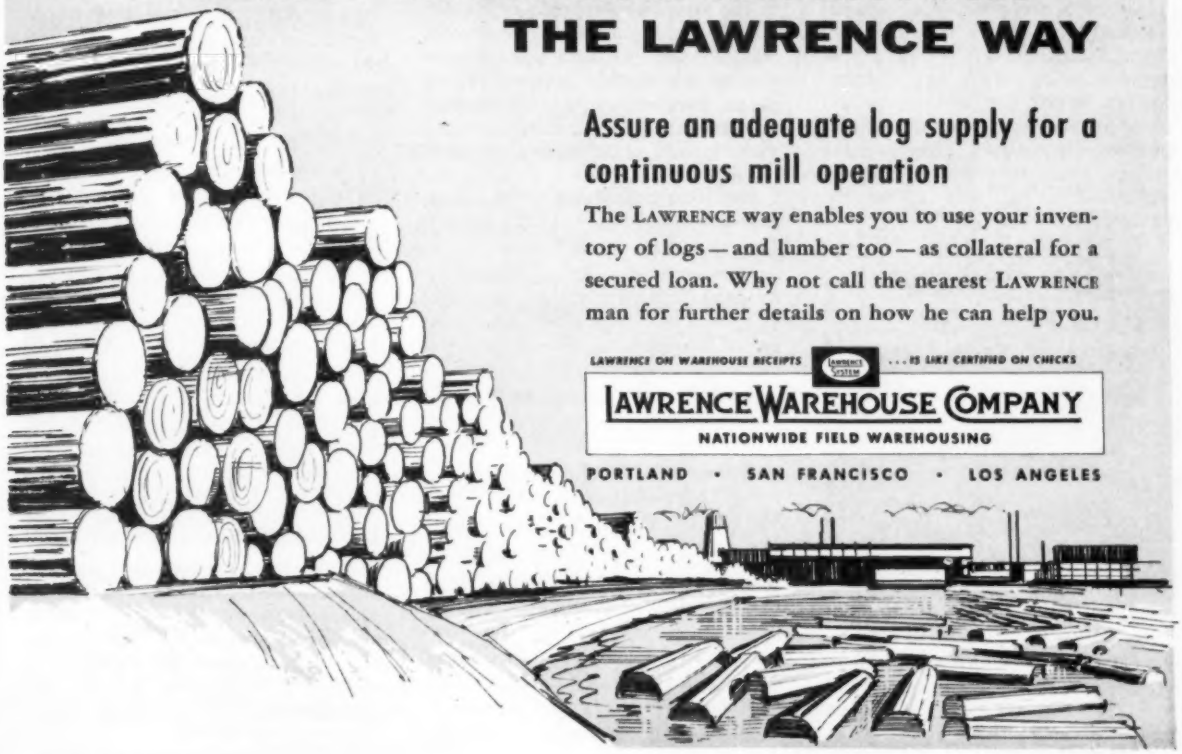
LOGS · SQUARES · LUMBER · SCANTLINGS · PANELS · PARQUET FLOORING

JORDAN INTERNATIONAL COMPANY

444 Market Street · San Francisco 11 · YUkon 2-7127

CABLE ADDRESS: JORDINCO

BUILD YOUR LOG INVENTORY THE LAWRENCE WAY



Assure an adequate log supply for a continuous mill operation

The LAWRENCE way enables you to use your inventory of logs—and lumber too—as collateral for a secured loan. Why not call the nearest LAWRENCE man for further details on how he can help you.

LAWRENCE ON WAREHOUSE RECEIPTS ... IS LIKE CERTIFIED ON CHECKS

LAWRENCE WAREHOUSE COMPANY

NATIONWIDE FIELD WAREHOUSING

PORTLAND · SAN FRANCISCO · LOS ANGELES

Headrig can be stopped in 23 seconds with DynAC controller. This 7-foot headrig at Plum Creek Lumber Co., Columbia Falls, Mont., driven by a 200-hp wound-rotor induction motor, is a typical application. Quick saw changes are possible and production time is gained.

DynAC unit consists of: Semiconductor rectifier stack, small transformer, control circuit fuses, contactor to apply direct current to motor and timing circuit to remove direct current after motor stops.

Electric Drive and Control Developments

By R. P. BLEIKAMP
Industrial Engineering Department
Westinghouse Electric Corp.

Electric braking will bring squirrel cage and wound-rotor induction motors to a stop smoothly and rapidly by applying direct current to the stator winding. While this braking method has been used for special applications for some time, only recently have standard units become available for application to all sizes of integral horsepower motors.

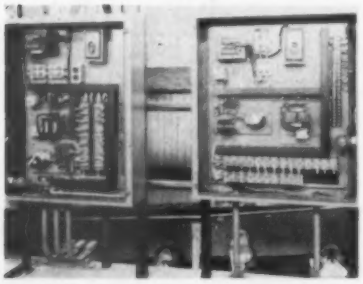
The d-c dynamic braking controllers come in two forms—either as braking units only for additional existing motor control, or as complete controllers for new installations.

The major advantages are (1) Adjustable braking torque, up to 8 times rated torque; (2) very smooth stop; (3) no possibility of reversal; (4) no inrush problem on a-c distribution system; (5) only one-third as much motor heating as in plugging, on squirrel cage motors.

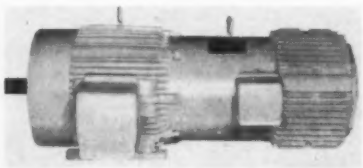
New type adjustable speed drives, called Rectiflow, consist of a wound-rotor induction motor coupled to a direct-current motor. The wound-rotor component is connected to the a-c power circuit in the usual manner.

The slip-ring circuit, instead of being connected to a resistor bank, is connected to a slip rectifier which converts the rotors alternating current to direct current. This direct current is then applied to the armature circuit of the d-c motor. The field circuit of the d-c motor is separately excited from a built-in rectifier. Speed control of the drive is

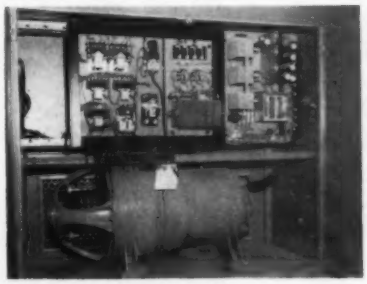
(Continued on next page)



Typical use of static control is on merry-go-round. This Cypak unit automatically provides correct routing of output and rejects scrap to waste conveyor. It cycles each time a piece is run through the resaw, well over a 1000 cycles per day. It insures maximum productive time.



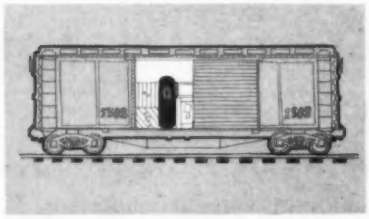
Rectiflow drive units range from 7½-hp up with speed ratios of 1½:1, 2:1, 3:1 and 5:1. Full load speeds are 1690 rpm or 1100 rpm. Speed regulation ranges between 5 and 7½% depending on rating. Either constant-horsepower or constant-torque characteristics can be had over specified speed range. They provide economical adjustable speed drive, good regulation, simple control and simple installation.



Magamp drive controls have no moving parts, no electronic tubes. The 40-hp adjustable voltage d-c drive employs magnetic amplifiers for speed regulation to steady production, independent of loading over wide speed range. Applications are for loads requiring variable speed operations.

Prevent cargo damage ...cut shoring costs

with the proven U. S. Shor-Kwik System of inflatable, returnable, reusable dunnage



Proved...you'll start saving money with your very first shipment. Tough, rubber-nylon inflatable Shor-Kwik® Dunnage cuts in-transit damage... eliminates cost of nonreusable shoring materials... saves on labor costs. Thousands of shipments have proved this out. To learn what this system can do for you, write or phone DExter 1-4000, United States Rubber, Providence 1, R. I.

US RUBBER **United States Rubber**

Electric Drive *(Continued)*

accomplished by adjustment of the d-c motor field current.

Static controls have real significance for the lumber industry. The rapidly widening use of automation in the industry has made reliable, maintenance-free controls of virtual necessity.

To fill this need are the control devices which are called static controls, to indicate the absence of any moving parts or contacts. They are miniature magnetic amplifiers and auxiliaries which can be combined to do the job traditionally performed by relay control systems. They are maintenance-free because they have no contacts, no springs, and no other moving parts to wear or get out of adjustment.

Magamp drive controls. Adjustable voltage d-c drives to obtain regulated drive speeds are rapidly gaining in use within the lumber industry. Using magamp control systems for such regulated drives is another step forward in the search for the ideal control system.

•

W. R. Grace Promotes Four in Lumber Division

The Pacific Coast Division of W. R. Grace & Co. has announced four promotions in line with the expansion of its lumber products operations.

Henri A. Muth, formerly in charge of hardwood and export lumber sales, has been promoted to manager of all lumber products operations with headquarters in San Francisco, Calif. Muth is a veteran of 40 years service in the Grace organization.

Lowell E. Patton, formerly Grace's northwest representative with headquarters in Portland, Ore., will continue in this capacity and will also assume management of export lumber sales.

Avery E. Allen has been promoted to southern California representative and will handle sales of plywood and hardwood in that area as well as for national distribution. Allen formerly handled Los Angeles plywood sales.

Martin F. Schram, who formerly handled imported plywood procurement in San Francisco, will manage northern California plywood sales and procurement with headquarters in San Francisco.

•

• J. Herbert Bate Co. is in the process of installing a barker at its Wallowa, Ore., operations and plans to install barker and chipper at its Lookingglass sawmill in Oregon.

MATER
Packaged Automation
SAWMILLS

complete turn-key sawmills from the ground **UP**

• **MATER** engineered

• **MATER** equipped

• **MATER** constructed

• **MATER** start up

....and the keys are turned over to you.

A MATER Packaged Automation Sawmill is a turn-key mill, designed by professional engineers, supplied by sawmill machinery specialists, built and started up by sawmill construction and operation men. It's a unique combination of services which provides you with a complete automation mill of the production capacity you require, at a fixed price and on a fixed start up date.

Call or write

MATER MACHINE WORKS, INC.
P. O. Box 410 • Corvallis, Ore., U.S.A.
Phone: PLaza 3-7335

High Pressure Pneumatic Conveying Equipment

RADER PNEUMATICS INC.

1739 N. E. 42nd Ave. • Portland 13, Oregon

FOREST PRODUCTS STOCKS •

La Salle Securities Co., Investment Securities,
208 La Salle Street, Chicago, Ill.

NOMINAL QUOTATIONS

August 5, 1959

STOCKS	Paid 1958	This Month Bid	This Month Ask	Last Month Bid	Last Month Ask
Ambassador Oil, Com.	$ ———	3⅝	4⅛	3⅜	3⅞
American Forest Products, Com.	1.00&S	35	OW	34	36½
Anderson Tully Co., Capt. Stk.	20.00	250	OW	250	OW
Atlas Plywood, Com.	———	15½	C	15¼	C
Atlas Plywood, $1.25 Pfd.	———	26½	28½	25¼	27
Biles-Coleman Lbr. Co., Com.	*	18	OW	17	OW
Boise Cascade Corp., Com.	.60	55½	58	45½	48
George E. Breece Lbr. Units	.30	2½	OW	2½	OW
British Columbia Forest Prod., Com.	.08	15	C	15⅝	C
Brooks-Scanlon, Inc. "A"	.55	19½	OW	19½	OW
Brooks-Scanlon, Inc., "B"	.55	19½	OW	19½	OW
Calaveras Land & Timber Co., Com.	2.00	26	OW	26	OW
Calcasieu Paper Co., Com.	1.50	25	OW	25	OW
Cascades Plywood Co., Com.	1.75	37	39	34	35½
Central Coal & Coke Co., Com.	1.00	30½	32½	30	32
Cherry River Boom & Lbr., Com.	———	33	OW	33	OW
Chicago Mill & Lbr. Co., Com.	1.25	26	28	25¾	27
Cloquet Lumber Co., Com.	*	1	OW	1	OW
Consolidated Naval Stores, Capt. Stk.	30.00	817	OW	817	OW
Container Corp., Com.	1.00	29¼	C	26¾	C
Container Corp., 4% Pfd.	4.00	89½	C	92	C
Crossett Company, Class "A"	.60	47	50	47	49
Crossett Company, Class "B"	.60	47	50	47	49
Crown Zellerbach, Com.	1.80	54¼	C	51½	C
Crown Zellerbach, $4.20 Pfd.	4.20	91	C	91	C
Curtis Companies, Com.		13¾	15	12½	13
Dierks Forests, Inc.	5.00	125	OW	125	OW
Evans Products, Com.	.25	28⅜	C	23¼	C
First Lumber Corp. Com.		18½	20½	19	21
Fordyce Lumber Co., Capt. Stk.	1.00	40	OW	40	OW
General Plywood, Com.		20⅜	C	22¼	C
Georgia-Pacific Co., Com.	1.00&S	45¼	C	47⅛	C
Harbor Plywood, Com.	.40	21⅜	C	20¾	C
Edward Hines Lumber Co. Com.	2.50	45	48	45	47
Insular Lumber Co., Com.	1.25	12	14	11½	13
International Paper, Com.	3.00&S	130	C	120⅛	C
International Paper, $4 Pfd.	4.00	89½	C	90¼	C
Keyes Fibre Co., Com.	1.20	26¾	28¾	25	27
Kirby Lumber Corp. Com.	1.00	46¼	48¼	45	47
Longview Fibre Co., Com.	3.00	91	93	92	94
Louisiana Central Oil & Gas., Com.	10.00	50	OW	50	OW
Louisiana Long Leaf Lumber Co.	5.00	150	OW	150	OW
Louisiana Sawmill Co., Com.	———	½	OW	½	OW
MacMillan & Bloedel, "B" Com.	1.05	40¾	C	41¼	C
McCloud River Lumber Co., Com.	4.00	82½	OW	81	82½
McCloud River Railroad, Com.	2.00	35	OW	35	OW
Meadow River Lumber Co., Com.	*	200	OW	200	OW
Medford Corp., Com.	7.00	250	OW	217	OW
Mississippi Land Co., Capt. Stk.	1.50	12	OW	12	OW
Northwest Paper Co., Com.	.80	35½	OW	34	38
O. & N. Lumber Co., Capt. Stk.	3.00	42	OW	42	OW
Olin Oil & Gas, Com.	———	21	23	19½	22
Ozan Lumber Co., Com.	2.00	90	OW	90	OW
Pacific Lumber Co., Capt. Stk.	10.00	305	OW	290	OW
Pickering Lumber Co., Com.	.30	10½	11½	10¾	11¾
Pine Tree Manufacturing Co.	3.65	50	OW	50	OW
Pope & Talbot, Inc. Com.	1.00	41	OW	33	35
Pope & Talbot, Inc., Pfd.	.30	4¾	OW	4¾	5½
Potlatch Forests, Com.	1.00	60½	63½	59½	62
Powell River Co., Ltd., Com.	1.50	38	41	43	45
Puget Sound Pulp & Tbr. Co., Com.	.80	25½	C	23⅛	C
Richmond Cedar Works Mfg. Com.	———	¾	1½	½	1
Richmond Cedar Works, Com.	———	1¾	2½	1¾	2¼
Ritter, W. M., Lumber Co., Com.	2.00	41	45	40	45
Roddis Plywood, Com.	.10	14¼	15¼	14	15
St. Regis Paper, Com.	1.40	53⅛	C	49¾	C
Southern Minerals Corp., Com.	———	5	6	5	6
Southwest Lumber Mills, Com.	———	14	15½	12¾	15
Tremont Lumber, Com.	2.00	65	OW	65	OW
U. S. Plywood, Com.	1.62½	49	C	50½	OW
Union Lumber Co., Com.	1.25	55½	OW	50½	OW
United States Lumber, Com.	.35	4⅝	5⅝	4¾	5¾
Upson Company, Com.	.80	12¾	13¾	13	14
Weyerhaeuser Timber, Com.	1.00	47¾	49½	45¼	47
Winton Lumber Co., Com.	.92	15	OW	15	OW
Wood Conversion Co., Com.	.40	20½	22	19½	21
Wooduse, Inc., Com. (Now Fersolin Corp. Com.)	———	¾	1¼	¾	1¼
BONDS					
Georgia-Pacific Corp. Subordinated Deb., 5s due 1976		83	86	84	87

* Information not available
OW—Offerings Wanted
BW—Bids Wanted
C—Last sale on Exchange where listed or bid
S—Stock

THE ABOVE INFORMATION, WHILE NOT GUARANTEED, IS OBTAINED FROM SOURCES WE BELIEVE TO BE RELIABLE

SANTOBRITE® S is a superior product for control of sap stain and mold. It is our pelletized grade of technical sodium pentachlorophenate. The pellets are non-dusting and easily dissolved. SANTOBRITE S is warehoused in all lumber centers. Vanderbilt technical representatives are always available to help with special problems.

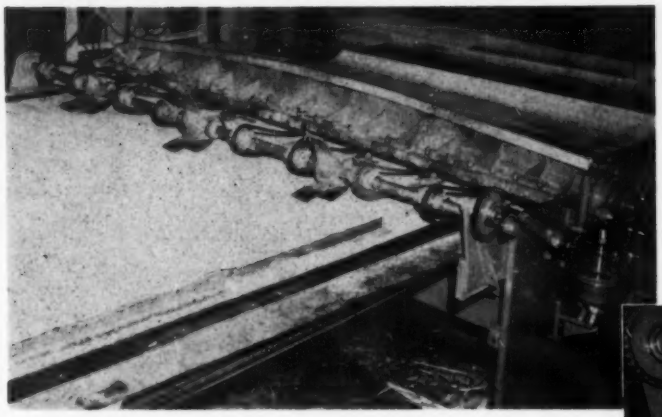
Write for information today.

Santobrite S

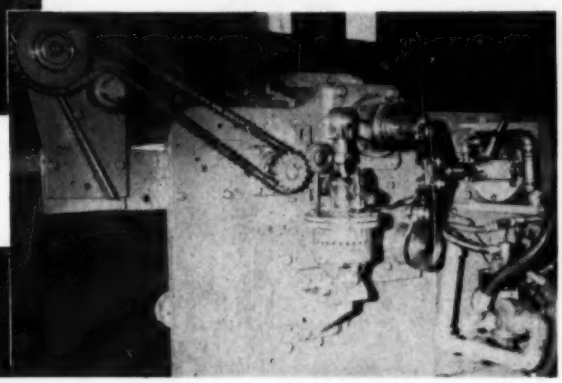
R. T. VANDERBILT COMPANY
SPECIALTIES DEPARTMENT
230 PARK AVENUE NEW YORK 17, N. Y.

SAVE VENEER with the NEW "ROK-IT" CLIPPER

CONTINUOUS PRODUCTION • LOWER MAINTENANCE COST • GREATER SPEED



1. Its 44-inch overall height combined with design and action will give your clipperman constant visual analysis before, during and after cut.
2. No shutdown time for knife or bar changes.
3. More clips because the "ROK-IT" has faster clipping action.
4. Low knife costs because the "ROK-IT" protects the cutting edge.



- NO VIBRATION
- AUTOMATIC LUBRICATION
- HUSKY, SIMPLE DESIGN
- FEW MOVING PARTS

Lease Purchase Terms Available

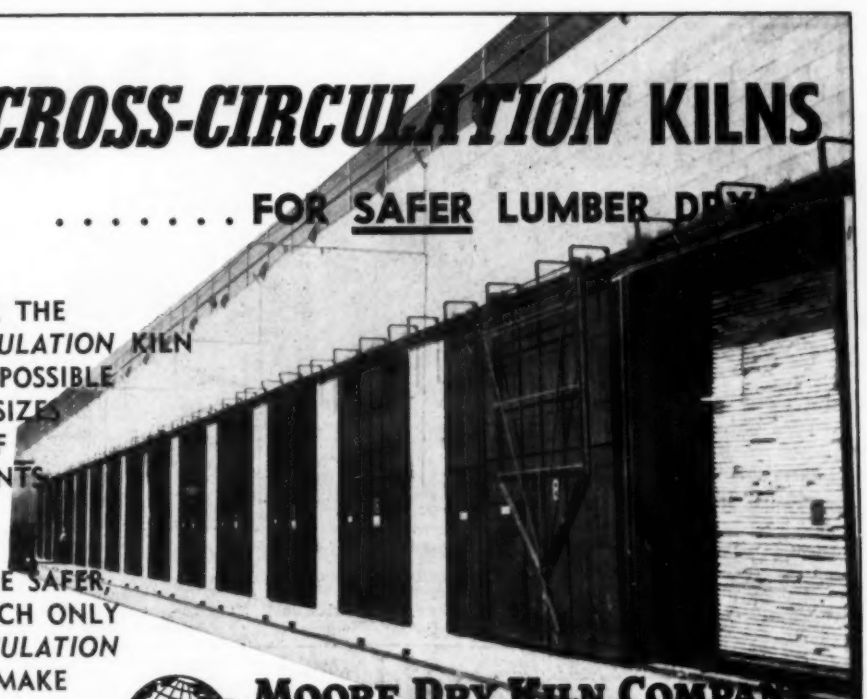
C. F. MACHINERY COMPANY
CUSTOM MACHINE MANUFACTURING
P. O. BOX 188 • SPRINGFIELD, OREGON
PHONE: Riverside 7-3335, TWX SPFD., ORE 072

MOORE *CROSS-CIRCULATION* KILNS

. . . . . FOR SAFER LUMBER DRY

SEASONING LUMBER THE MOORE *CROSS-CIRCULATION* KILN WAY HAS MADE IT POSSIBLE FOR MILLS OF ALL SIZES WITH ALL KINDS OF DRYING REQUIREMENTS TO REAP PROFITS!

FIND OUT HOW THE SAFER, SURER DRYING WHICH ONLY MOORE *CROSS-CIRCULATION* KILNS OFFER CAN MAKE YOUR MILL A PROFITABLE ONE. WRITE TODAY FOR DETAILS.



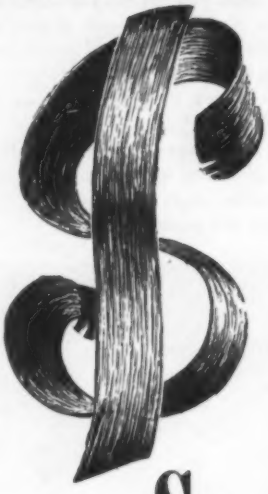
MOORE

MOORE DRY KILN COMPANY

JACKSONVILLE, FLORIDA — BRAMPTON, ONTARIO — VANCOUVER, BRITISH COLUMBIA — NORTH PORTLAND, OREGON

World's Largest Manufacturers of Drying and Handling Systems for Lumber and Veneer

DOLLAR SHAVINGS



THE SHARPER THE EDGE THE KEENER YOUR PROFITS

From raw steel to final sharpening, we build in greater shock resistance and longer-lasting, sharper cutting edges . . . to give you more production at less cost.

Talk to us today about your requirements.

SPEAR & JACKSON

"The Saw Without a Flaw"

EUGENE, ORE.

50-105A

EDGERS

SCHURMAN 8" TBL 66" Table Edger with infeed & outfeed tables mounted on sled.

any size . . . any type

Since 1934 we have been visiting mills, studying different types of edgers in use, and consulting with the operators. We have built edgers for practically all types of sawmill operations . . . some were our standard model edgers . . . others were custom built models to solve a particular mill problem.

This Schurman Table Edger was custom built for Swanberg Bros. Lumber Co., Kalama, Wash., for their stud mill operation.

CALL US TODAY . . . LET US SHOW YOU WHY WE SAY "WE CAN SUPPLY THE SIZE AND TYPE EDGER YOU NEED FOR YOUR MILL."

RECENT SCHURMAN EDGER DELIVERIES

Kenai Lumber Co.
Seward, Alaska

Broughton Lumber Co.
Underwood, Wash.

Mt. Jefferson Lumber Co.
Lyons, Oregon

Cuddeback Lumber Co.
Eugene, Oregon

SCHURMAN MACHINE WORKS, INC.

WOODLAND, WASHINGTON • PHONE CApitol 5-2671

G-P Buys Booth-Kelly Holdings in Oregon, Secures Interest in B. C. Plywood Firm

Georgia-Pacific Corp. has been busy again.

Recent actions include:

• Outbid U. S. Plywood Corp. with an offer of $93 million to acquire Booth-Kelly Lumber Co. holdings in Oregon.

• Secured an option to purchase 150,000 class B voting shares of Western Plywood Co., Vancouver, B. C.

• Announced it would build a pilot plant to produce chemicals from bark and wood processing plant residues.

• Announced tentative plans to build a newsprint pulp mill at Juneau, Alaska.

Purchase of Booth-Kelly was the big news. With this action, G-P added 3 billion board feet of timber and about 143,000 acres of timberland to its growing timber holdings. The timber stand is one of the better ones in the west. It has a well developed road system.

The firm's manufacturing units grew to 24 with addition of the Booth-Kelly mill, rated at 100 million feet a year.

G-P officials say the Springfield area facilities of Booth-Kelly will be integrated into its long range plans. They say added facilities are expected at Springfield to better utilize a larger portion of the timber harvest, thus achieving a better balance between timber ownership and manufacturing facilities.

Chips from Springfield can be economically transported to G-P's paper mill at Toledo, Ore., now being enlarged.

Robert P. Pamplin, president of G-P, becomes president of Booth-Kelly. The board of directors will include Robert S. Miller, John S. Brandis, Julian N. Cheatham, Robert E. Floweree, William H. Hunt, Harry J. Kane, Mary A. McCravey, Marion L. Talmadge and Mr. Pamplin.

Acquisition of shares in Western Plywood Co. is part of a two-way proposition. For the option to purchase the shares, G-P agrees to provide a steady supply of high grade peeler logs to Western Plywood's four plants and to pool technical, administrative sales information with the Canadian firm.

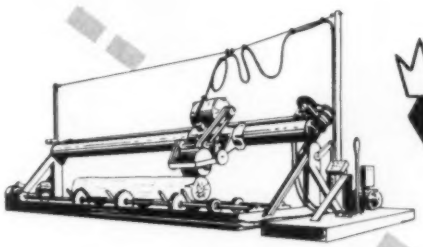
The option agreement provides a $20 a share purchase price for G-P up to July 1, 1962, $25 a share to July 1, 1965 and $30 a share to July 1, 1968.

Under the agreement, Western's board of directors is expanded to 11. Mr. Pamplin joins the board.

The pilot plant to produce chemicals will probably be located in Oregon, G-P officials say. James L. Buckley, vice-president for research and development, said the plant would "develop an important family of chemicals from bark and wood residue that previously had no use."

A newsprint pulp mill at Juneau was back in the news with an announcement by Mr. Buckley, president of Georgia-Pacific Alaska Co., a G-P subsidiary, of tentative plans for construction. Mr. Buckley's statement was prompted by proposed legislation to build a $40 million power plant near Juneau, provided G-P builds a pulp plant there. Mr. Buckley said that if the power plant can be completed by July, 1964 and if a survey of other factors turns out to be as favorable as now indicated, the Juneau newsprint pulp mill will be assured.

G-P holds a contract with the forest service for 7.5 billion feet of timber in Alaska.

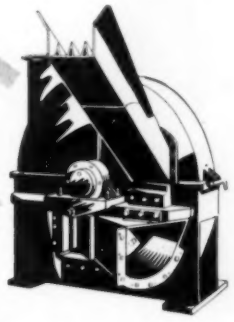


DC-6 BARKER

Efficient, quality barking; 5" to 36" diameter range. Four standard barking heads* to meet all rigid specifications. Also on hardwoods.

DD-48 DoubleDuty HORIZONTAL CHIPPER

New design with exclusive re-chipper infeed spout*. High chipping capacity, low operating cost.



CS-20 CHIP SCREEN*

Horizontal oscillating type with double sawdust elimination. Efficient screening for small operations.

*Patents Pending

Soderhamn's

TRIPLE CROWN TRIO

Lowest cost heavy duty Barker-Chipper-Screen installation on the market

Total investment required less than $25,000—set up and operating. Will prove profitable in mills producing as low as 7000 bft per day.

Before you invest — investigate the Triple Crown Trio. Get full details today — call, wire or write:

SODERHAMN MACHINE MANUFACTURING COMPANY

Talladega, Alabama

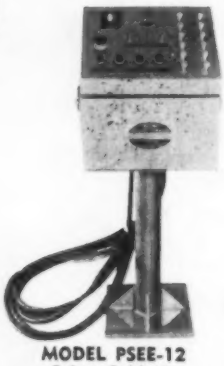
West Coast: 9442 S.W. Barbur Blvd., Portland, Oregon
British Columbia: Galbraith & Sulley, Vancouver
Eastern Canada: Forano Limited, Montreal

Often Imitated . . . but never equalled

Sel-Set® automation for the LUMBER INDUSTRY

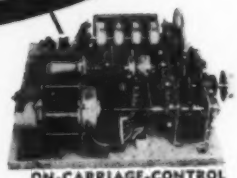
ALL NEW ALL PURPOSE "MODEL M3LC"

Designed especially for mills who want the very best in setwork performance. The only truly all-purpose remote control carriage setworks available.



MODEL PSEE-12 Select-O-Matic

Sawyer Control. Provides push-buttons for 12 setting positions with Sel-Set's electronic master control for adjusting all positions simultaneously; dog override and taper controls.



ON-CARRIAGE-CONTROL "BRAIN-BOX"

No other remote control system offers so complete a unit as highly accurate, yet simple in design. Employs a Selsyn motor instead of a potentiometer and therfore requires no adjustment. Provides extreme accuracy and long life.

ORIGINAL DOUBLE MOTOR IN LINE "POWER-PAK"

This new concept in electric power units features two continuously forward running standard motors, coupled in line to a standard gear reduction unit. No stopping or reversing necessary . . . provides greater accuracy through reduced inertia.

Other manufacturers have copied Sel-Set's well-known "Years ahead" models but none have ever equalled the famous Set-Set Setworks performance. The same Sel-Set engineering team that pioneered the first riderless carriage is constantly developing newer and even better models for all types of sawmill machinery to help you cut production costs and increase your profits. Units like these shown above have paid for themselves in labor savings, increased production and higher grade realization in well under six months. Whether you're large or small in terms of production, Sel-Set makes a setworks that will make profits for you. It will pay you to investigate Sel-Set Automation.

WRITE, WIRE OR PHONE FOR DETAILED INFORMATION AND PRICE QUOTATIONS

Authorized Sel-Set Dealers Having Complete Sales and Service Facilities

THE WHELAND CO. Chattanooga, Tenn.
KLAMATH MACHY. CO. Klamath Falls, Oregon
MILLER MACHY. CO. Missoula, Montana
GENERAL MACHY. CO. Spokane, Washington
FRED E. BARNETT CO. Eureka, Ukiah, Sacramento, San Francisco

U.S. Patent Numbers 2574393, 2661036, 2661402, 584786, 2696853, 2888047, 2893448.

MORE SEL-SET REMOTE CONTROL SETWORKS ARE NOW IN USE THAN ALL OTHER MAKES COMBINED . . .

Here are some of the more recent installations:

Willamette National Lumber Co. Foster, Oregon
R. L. Smith Lumber Company Anderson, Calif.
Collins Pine Co. #1 Chester, Calif.
Weyerhaeuser Timber Co. (Mill 3) Longview, Wash.
Weyerhaeuser Timber Co. (Mill 1) Longview, Wash.
Weyerhaeuser Timber Co. (Mill 3) Everett, Wash.
Newton Lumber Company Newton, Texas
Colton-Hanlon, Inc. Cayuta, N. Y.
W. W. Sutherland Lumber Co. Bugettstown, Pa.

SCHEDULED INSTALLATIONS:

Collins Pine Company (Mill 2) Chester, Calif.
Weyerhaeuser Timber Co. (Mill 2) Enumclaw, Wash.
International Paper Company Vaughn, Oregon
Lost Creek Lumber Company Kalispell, Montana
Zordell Lumber Company Samuels, Idaho
Holmes & Company, Inc. Columbia City, Ind.

SEL-SET IS THE REGISTERED TRADEMARK OF SEL-SET MACHINERY CORPORATION

SEL-SET *Machinery Corporation*

290 Moyer Lane, P. O. Box 1035, Salem, Oregon, EMpire 3-3123

Available in Canada through Elworthy & Co., Ltd., Licensed Manufacturers, Vancouver, B.C.

Alaska Plywood Resumes As Veneer Operation

Juneau Lumber Co. has purchased Alaska Plywood Co. in Juneau, Alaska, for $530,640 and announced plans to reopen the plant as a veneer operation. Full plywood production is possible in 1960, according to Thomas A. Morgan, president of Juneau Lumber.

The city of Juneau has agreed not to enforce its tax lien on the plywood property for five years, unless the plant closes, and has given a five-year, 75% property tax exemption as incentives encouraging Juneau Lumber to purchase and reopen the plant.

Mr. Morgan says he has received an agreement for log supply from the forest service.

•

Nicolai Resigns Post At Plywood Plant

Theodore Nicolai is leaving his post as executive vice-president of Oregon-Washington Plywood Co., Garibaldi, Ore., to take up his duties as president of Nicolai Door Manufacturing and Columbia Laminating Co., both Portland, Ore. firms which are owned and controlled by his family and related interests.

Robert J. Hamann, recently plant superintendent of Roseburg Lumber Co., Coquille, Ore. and formerly with Oregon-Washington Plywood, has been elected vice-president and general manager of the firm.

•

Cascades Adding Stud Mill At Coos Bay, Oregon

A new $300,000 installation is designed to use sub-species and non-peelable timber from Cascades Plywood Corp.'s holdings in the area. This new plant and a veneer plant recently put in production will allow Cascades to achieve more complete utilization from its southern Oregon timber.

Mater Machine Works, Inc., Corvallis, has a contract for engineering, construction and equipment for the mill.

B. V. Hancock, executive vice-president of Cascades, says the highly automatic mill will have a daily capacity of 20 million feet of 8-foot studs. Production is anticipated in December.

•

• Henry Cohen has been named sales manager of Plywood Corporation of America, according to Norman Bushberg, general manager of the firm. Mr. Cohen has been active in wholesale plywood sales in the San Francisco area and in Oregon for seven years.

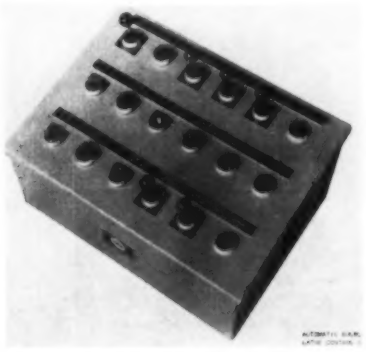
Controls Simplify Veneer Manufacture

The latest electrical control developments are being applied to machines in the plywood industry. The result is lower-cost operation coupled with higher production and simplified procedures. One of the manufacturers who offers a line of these controls is Redco of Seattle, Wash.

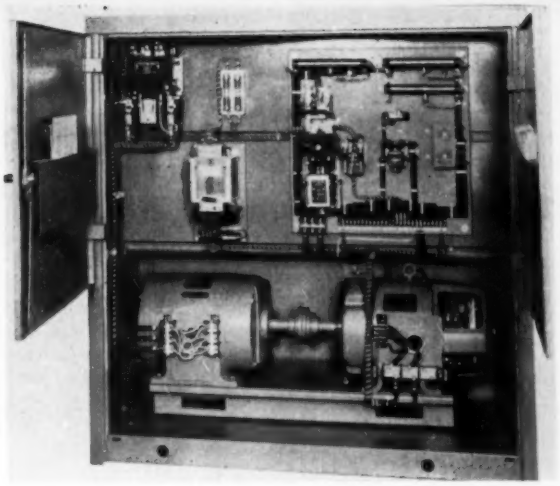
Automatic veneer tipple and tray control have been installed in over 50 plywood plants. This packaged installation is placed in operation over a week end with no loss in production. This device is useful in effecting maximum use of veneer trays and speeding up the lathe and clipper operations and in saving one man per shift.

Another green-end automation-type innovation is automatic double spindle lathe control. The Redco double spindle control virtually eliminates nearly all of the operations of the lathe operator, allowing him to maintain full attention to the log being peeled. The automatic control system operates in the following sequence:

When the log being peeled reaches a diameter of 14", the large spindles automatically retract, leaving only the smaller 5" diameter spindles in the log. At 12", the back pressure roll is lowered and extended to put back pressure on the remaining log being peeled so as to maintain a constant veneer thickness. When the log reaches a 5½" diameter limit, the feed clutch is automatically disengaged, the carriage is retracted to a predetermined opening, the small spindles are also retracted, the steady-rest roll punches the small core out of the spindles, the steady rest then lifts itself out of the way and finally the log charger is actuated to bring the next log into the lathe. All of this is automatic.



AUTOMATIC double spindle lathe control console is located at lathe operator's station.



VENEER TRAY DRIVE SYSTEM is housed in steel cabinet. Items in the easily installed cabinet include motor-generator set for tray drive, all controls including the synchronizing panel, plug-in relays and hoist controls.

. . . now in operation at

LANE PLYWOOD, INC.
Eugene, Oregon

ABERDEEN PLYWOOD
& Veneer, Inc., Aberdeen, Washington

WRITE for descriptive folder.

In Canada:
E. V. PRENTICE CO. LTD.
5936 Fraser Street
Vancouver 15, B.C.
Phone: FAirfax 5-5212

E. V. PRENTICE CO.
2303 N. RANDOLPH ST. • PORTLAND 17, OREGON
Phone: ATlantic 2-3262

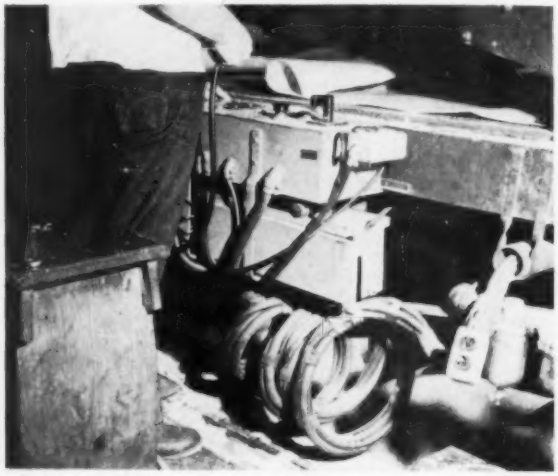
Clipper Operator Handles His Own Spotting

with movable, condensed control panel. Clipper speed is increased.

The operator of the Coe semi-automatic clipper at Union Lumber Co., Ft. Bragg, Calif., is located on the side opposite the timing chain and, with movable, condensed control panel pictured below, has an effective reach of about nine feet.

The clipper, originally run at 120 feet per minute, now operates at 200 feet per minute. Most of the stock run is 1/9-inch. A strip puller steps up to help straighten out any tie-ups. Greater efficiency results.

Essence of the new system is embodied in this photo of the operator using the small, hand extension control—which is part of the system—and also straightening veneer as it passes his position. The hand control unit has three buttons.



Full condensed panel is shown here. It is at rest at the clipper end of the rail on which it rides. Hand buttons are for "strip," and "24" and "48." Operator can clip one each of these on the roundup.

Control panel travels on four small flanged wheels riding on 6-inch channel iron. Whole track assembly plus guard board is suspended on steel straps mounted on side of feed table. Operator here manipulates both main panel and hand extension unit.

Light line at left top, below supporting straps, is ordinary steel pipe from which cable is suspended. Flat steel strap is looped over pipe and rises outside guard board, where it is fastened to the main control panel. The cable is attached to the strap.

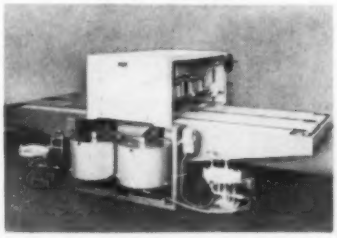
Northeastern Beech Promotion Scheduled

Frank A. Reed, treasurer of the Northeastern Loggers Congress and newly elected chairman of the Northeastern Beech Council, promises an extensive program to promote northeastern beech. Included are:

- Bulletins on beech, from logging to seasoning, machining and finishing for foremen and superintendents.
- A group of speakers to be made available for meetings of furniture manufacturers association who will tell the story of beech manufacturing.
- A new publication, due in October, to tell what has been done and can be done with beech. It will be free, available from the Northeastern Beech Council, Old Forge, N. Y.
- Manufacturers interested in northeastern beech will be given a suitable amount of lumber with which to experiment.
- Design competitions are scheduled in schools and colleges for novelties made from beech.

Other officers of the association are Fred C. Simmons, Northeastern Forest Experiment Station, Upper Darby, Pa., research committee chairman, and Nelson Nash, Great Eastern Lumber Co., Inc., Glens Falls, N. Y., publicity chairman.

STEINEMANN COATER



Save By Pressure Curtain Application

Applies all finishes uniformly to practically any size or shape product. No Waste. Unused material recovered by recirculating system.

More Than 50 U.S. Installations

For additional data, contact

wilco machine works, inc.

Municipal Airport, P.O. Box 3722
Memphis 14, Tenn.
Phone Whitehall 8-4555

NOXTANE Maintains Quality . . . Stops Sap Stain!

Noxtane kills fungi growth at the surface! Stops formation of blue-black stains that degrade lumber, eat up profits!

Easy to use! Just mix one 10-lb. bag with 100 gallons of water—can be used as a dip or spray. Dissolves quickly . . . penetrates fast . . . counteracts wood acids . . . resists leaching! Equally effective on pines *and* hardwoods.

Costs only a few cents per thousand feet—can save you thousands of dollars every year.

Get the complete story! Mail coupon for free folder on best way to stop degrading, protect profits!

WOOD TREATING CHEMICALS CO.
5137 SOUTHWEST AVE. • ST. LOUIS 10, MO.
WAREHOUSES: Atlanta • Charlotte • Oakland, Calif. • Portland, Ore. • St. Louis • Mobile Arcata, Calif. • Redding, Calif. • Jacksonville Macon • New Orleans • Shreveport • Meridian, Miss. Grants Pass, Ore. • Klamath Falls, Ore. • Salem, Ore. • Columbia, S. C. • El Paso.

WOOD TREATING CHEMICALS COMPANY
5137 SOUTHWEST AVE., SAINT LOUIS 10, MO.

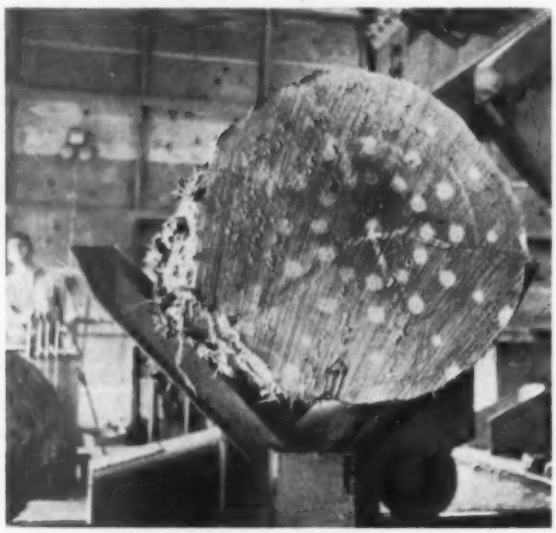
Send me a copy of "Noxtane Stops Sap Stain" and name of nearest warehouse.

Company.....
Address.....
City.....Zone....State...
Signed.....

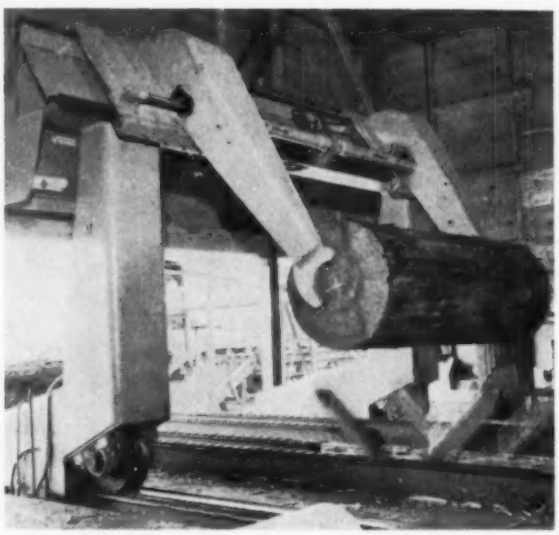
Semi-automatic Charger combines hydraulics, electric operation for fast, accurate charging of veneer lathe.

A Nicholson hydraulic-electric charger and a Vickers hydraulic unit operating pre-centering yokes are key units in Santiam Lumber Co.'s green end at Sweet Home, Ore.

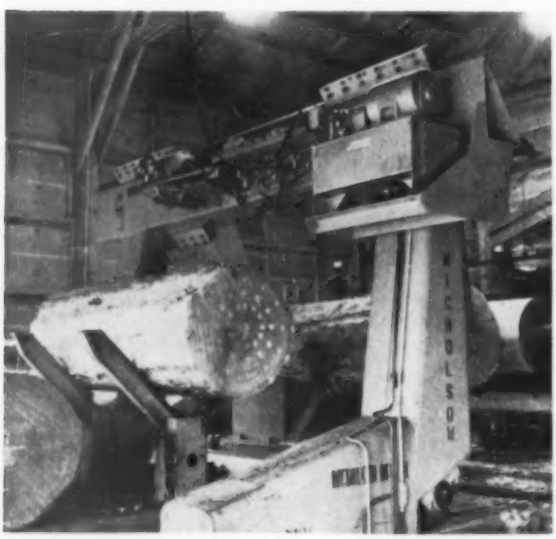
Hydraulic cylinders operate the arms which grasp the blocks and move them into the lathe. The entire carriage rolls on tracks with chain driven wheels.



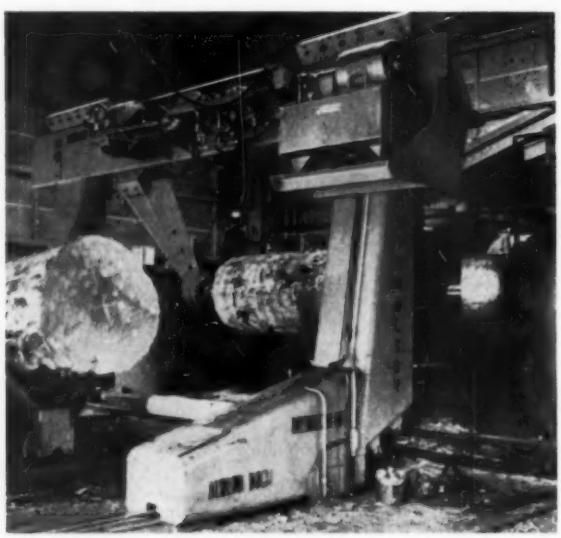
Yokes come up out of the floor controlled by chargerman, left rear, who uses light spots projected on block's end to pre-center the block. Block's center is chalk-marked.



Charging unit wheels back on tracks and arms grasp block. Yokes are dropped, ready to receive next block as it comes up sidelift from pond at left.



Chargerman rolls charger forward toward the lathe, clearing the yokes to receive the next block which is shown here being pre-centered.



Lathe operator moves block into lathe after previous block is peeled. When chucks are in, arms are released and carriage returns to pick up next pre-centered block.

LUMBER PRICES

Douglas Fir

1x8	Utility S4S KD	$ 62- 67.00
2x4	Construction Dimension S4S KD	94- 96.00
1x4	C&Br VG Flooring KD	180-185.00
1x6	C&Br Drop Siding KD	155-160.00
1x6	C&Br S4S KD	170-175.00
1x8	C&Br S4S KD	170-175.00
1x10	C&Br S4S KD	175-180.00
1x12	C&Br S4S KD	215-229.00

Construction Timbers and Plank

3x12	6-20 feet	$ 95- 98.00
3x12	22-24 feet	100-103.00
3x12	26-32 feet	108-113.00
4x4	8-20 feet	96- 99.00
4x4	22-24 feet	101-104.00
4x4	26-32 feet	110-115.00
6x6	8-20 feet	95- 98.00
6x6	22-30 feet	102-105.00
6x6	32-40 feet	102-105.00
8x8	22-30 feet	117-120.00
8x8	22-30 feet	94- 97.00
8x8	32-40 feet	99-102.00
8x8	32-40 feet	114-117.00
6x10, 8x10, 10x10, 12x12— 8-20-		92- 95.00
6x10, 8x10, 10x10, 12x12—22-30'-		97-100.00
6x10, 8x10, 10x10, 12x12—32-40'-		112-115.00

Construction Dimension (Green)

2x4	6-24 feet	$ 81- 83.00
2x6	6-24 feet	81- 83.00
2x8	6-24 feet	81- 83.00
2x12	6-20 feet	82- 84.00

Standard & Btr. Boards (Green)

1x4	6-20 feet	$ 65- 68.00
1x8	6-20 feet	78- 81.00
1x12	6-20 feet	76- 79.00

Douglas Fir Plywood

¼-inch AD SO1S $ 76.00

Southern Pine (KD Stock)

Vertical Grain Flooring

	B	C	D
1x4	$210.00	$190.00	$153.00

Flat Grain Flooring

1x4	155.00	145.00	130.00
1x6	185.00	177.00	120.00

Drop Siding

1x6 No. 106	190.00	182.00	132.00
1x6 No. 116	190.00	182.00	132.00

Boards and Shiplap

	1x6	1x8	1x10	1x12
No. 1	$130.00	$130.00	$130.00	$175.00
No. 2	85.00	88.00	87.00	98.00
No. 3	72.00	82.00	80.00	80.00

No. 1 Dimension

	12	14	16	18	20
2x4	102.00	102.00	102.00	117.00	117.00
2x6	100.00	100.00	100.00	112.00	112.00
2x8	99.00	97.00	95.00	110.00	110.00
2x10	105.00	104.00	106.00	120.00	120.00
2x12	115.00	110.00	110.00	120.00	125.00

No. 2 Dimension

	12	14	16	18	20
2x4	97.00	97.00	97.00	109.00	109.00
2x6	93.00	93.00	95.00	104.00	106.00
2x8	96.00	94.00	93.00	100.00	104.00
2x10	96.00	98.00	96.00	105.00	105.00
2x12	99.00	99.00	99.00	110.00	115.00

Western Pine

Ponderosa Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
C Select RL	$253.60	$260.21	$250.66
D Select RL	171.07	191.46	180.72

Shop S2S	No. 1	No. 2
5/4	$138.89	$108.21
6/4	143.42	109.37

Commons S2 or 4s	No. 2	No. 3
1x8" RL	$101.98	$ 79.14
1x12" RL	112.59	83.05
4/4 No. 4 Common S2 or 4S		$73.55

Idaho White Pine

Selects S2 or 4S	4/4 RW	6/4 RW
Choice (C) RL	$265.17	$297.54
Quality (D) RL	177.80	248.28

Commons S2 or 4S	Col. (1)	Ster. (2)	Std. (3)
1x8" RL		$128.99	$ 92.28
1x12" RL		109.22	101.45
4/4 Utility (No. 4) S2 or 4S RW&L			$68.50

Sugar Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
No. 1 & 2 Clear RL	$280.59	$285.75	$280.95
C Select RL	274.04	276.94	270.09
D Select RL	196.12	200.45	198.85

Shop S2S	No. 1	No. 2	No. 3
5/4	$146.43	$110.30	$ 79.26
6/4	144.40	109.00	78.31
8/4	165.78	119.33	70.65

Larch-Douglas Fir

4/4 No. 3 Common S2 or 4S	$ 71.19
2x4 No. 1 Dimension RW&L	90.01
2x4 No. 2&Btr. Dimension RW&L	81.28

U. S. Plywood to Build Round Wood Board Plant

A particle board plant with an annual capacity of 60 million square feet, ⅜-inch basis, will be erected at South Boston, Va., on the Dan River. Construction will be started this year. Completion is anticipated a year later.

The plant will draw its round wood supply from 250,000 acres of managed Southern Pine in the immediate area. Plant requirements of about 50,000 cords a year can be perpetually met by the managed stand.

Gene Brewer, president of U. S. Plywood, says the new plant will enable the firm to expand its sales in the rapidly growing eastern markets.

Corinth No. 0 SAWMOBILE

A dependable conventional sawmill on wheels

A truly mobile mill, designed to meet modern methods of lumber production. Can be quickly and easily towed through the woods for selective cutting in large tracts. Attached as a trailer to your truck, the SAWMOBILE is built for normal truck speeds. Estimated set down time: 30 minutes—pick up time: 15 minutes. Reduce your cutting costs . . . earn more profits . . . with the Corinth SAWMOBILE.

For the most modern sawmill machinery and equipment, always look to CORINTH-AMERICAN . . . symbol of sawmill quality since 1904. **Write or call us about your every lumbering need.**

CORINTH AMERICAN MODERN SAWMILL MACHINERY

CORINTH MACHINERY COMPANY
AMERICAN SAWMILL MACHINERY CO.
Corinth, Mississippi

EXPORT SALES DIVISION: 30 CHURCH ST., NEW YORK 7, N.Y.

Madison Lab Losing Two Experts: Dr. Hall and Dr. Stamm. Both to Continue Work.

Dr. J. Alfred Hall is retiring as director of the U. S. Forest Products laboratory and will be succeeded by Dr. Edward G. Locke, chief of the division of wood chemistry at Madison for eight years. Mr. Hall will do consulting work for industrial concerns in the forest products field. He will headquarter in Portland, Ore.

Dr. Alfred J. Stamm, expert in research on the physical chemistry of wood, retires from the lab and moves on to North Carolina State College, Raleigh, where he will teach and continue his research.

Dr. Hall retires as only the fifth director in the nearly half century that the laboratory has been in existence. His career in the forest industry began with the forest service in 1930 as a biochemist on the lab's staff. Following assignments included assistant director of the experiment station at Berkeley, Calif., director of the Central State station at Columbus and director of the experiment station in Portland, Ore.

A highlight of Dr. Hall's directorship at the lab was his participation in a presidential commission task group in 1957 that recommended greatly inincreased research on wood to utilize effectively much low-quality timber as well as industrial wastes.

Dr. Locke has taught chemical engineering at Oregon State College and served as technical adviser for the Oregon Forest Products Laboratory. He worked on the development of a wood hydrolysis process used in a plant at Springfield, Ore., for production of ethyl alcohol.

Dr. Locke was in charge of the forest utilization service unit in Portland during World War II, working with Mr. Hall.

Dr. Locke has supervised a broadly expanded program of research on production of industrial chemicals from low-grade wood and harvesting and milling residues at the Madison lab.

Dr. Stamm started his work at the lab in 1925 and has kept at it since with exception of two interruptions . . . for further research and training in Sweden and Australia.

Dr. Stamm says his most important work has been in basic research on movement of liquids and vapors through wood. "We need this basic information," he points out, "if we are to develop more effective ways not only of stabilizing wood but of seasoning it and otherwise improving it for use."

One of his final efforts at the lab was completion of research dealing with the movement of moisture through passages in wood so fine as to be invisible even under the microscope.

He has also played major roles in development of impreg, compreg and acetylated wood.

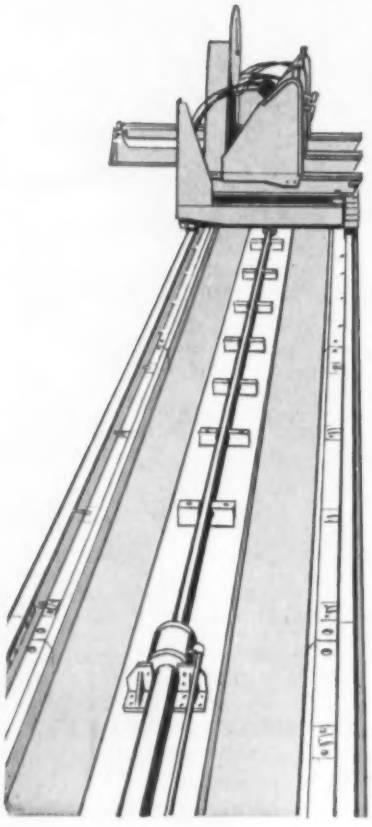
•

• Dr. Wilfred A. Cote, Jr., assistant professor of wood technology at the State University College of Forestry at Syracuse University, has been awarded a Fulbright Post-Doctoral Research fellowship. He will do advanced research in the electron microscopy of wood structure at the Institut Fur Holzforschung und Holztechnik at the University of Munich in West Germany.

Increase sawmill production

Reduce operating and maintenance costs

Berry
HYDRAULIC SHOTGUN
Carriage Drive



This modern drive, using a powerful hydraulic piston to move the carriage, is far more efficient than steam. Available for all carriage weights and speeds, it increases production and reduces operating and maintenance costs. Berry drives can be installed with individual power units or for operation on "lazy horsepower" off the head rig power source. The complete unit, Shotgun Drive and Pump Package, are engineered to your requirements by hydraulic specialists. Ask for a free survey of your mill and report on estimated savings with the Berry Hydraulic Shotgun Carriage Drive.

Berry Hydraulics

A division of
Oliver Tyrone Corporation

General sales office: Oliver Building, Pittsburgh 22, Pa. — Southern sales office and plant: Corinth 1, Miss.

Northeast Loggers Set Utilization Session

"More Profitable Use of Mill Residues" will be the topic of the conference to be held early in November, probably at the Hotel Queensbury, Glens Falls, N. Y.

Fred C. Simmons, chairman of the utilization division of the Northeastern Loggers Association, says papers will be presented on markets and specifications of the various salable products that can be made from coarse materials, such as slabs, edgings and veneer cores, and from such fine material as sawdust, shavings and bark.

Products to be discussed will include pulp chips, charcoal, particle board, mulch, soil amendment and bedding for use by farmers, sawdust for industrial use and wood as a source of chemicals.

Equipment involved will be discussed.

•

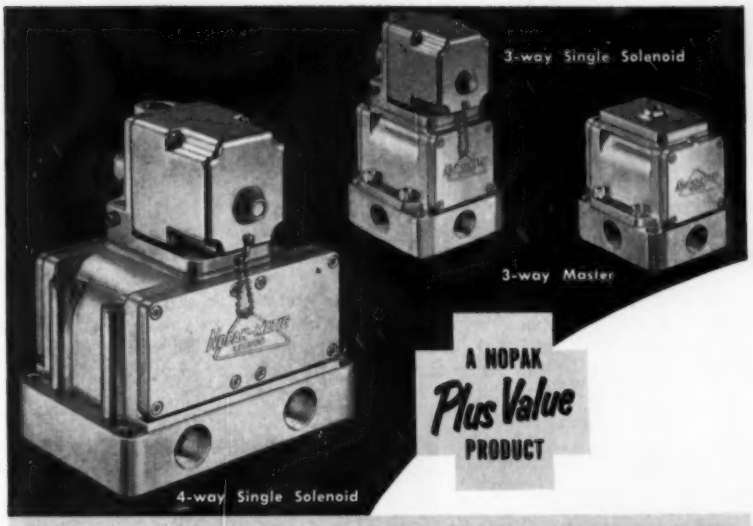
• Otis H. Goolsby, for some years in charge of the National Hardwood Lumber Association, Memphis, Tenn., district, has been appointed to the instructorship of the association's inspection training school in Memphis.

OBITUARIES

HERBERT F. JEFFERSON, 71, vice-president of the Nettleton Timber Co. died in July following an illness of almost three years. Mr. Jefferson was born and educated in England. He moved to the United States in 1916. He joined the Nettleton firm in 1933. Mr. Jefferson was active in the West Coast Lumbermen's Association and the Puget Sound Log Scaling and Grading Bureau.

ELMER S. GLASPIE, 71, founder of Glaspie Lumber Co. which later became a part of the Anglo-Canadian Timber Products organization in North Vancouver, B. C., died recently. Minnesota-born Mr. Glaspie worked for several years at the old Alberni-Pacific Lumber Co. in Port Alberni. He moved to Vancouver in 1935 to start his own business. He retired in 1954.

HENRY C. RELF, 61, managing director of Pacific Forest Industries, exporters of plywood, and president and manager of International Packaging Corp., both Tacoma, Wash., died in July following a stroke. Mr. Relf had been associated with the plywood industry and exporting business in the Pacific Northwest since 1922.



A NOPAK Plus Value PRODUCT

NOPAK-MATIC

Piston-Poppet Valves Now in 6 Pipe Sizes!

Another Plus Value for You

Since their introduction, Nopak-Matic Control Valves have *proven in service* that they bring you all of the features and operating advantages claimed for them:

- Exclusive "Flow-Director" Pilot Heads for greater versatility
- Complete interchangeability of Pilot Heads (The 3 Pilot Heads fit all models)
- Replaceable self-cleaning seats
- High tolerance to dirty air (not hurt by dirt)
- Designed for Fast Maintenance *(Eliminates costly down time)*
- 100% J.I.C. at no extra cost!
- Millions of trouble-free cycles
- Simplified Piping
- High-speed split-second performance
- Light weight, compact, corrosion resistant

NOW AVAILABLE IN SIX Standard Pipe Sizes from ¼" to 1¼"

Now *all* Nopak-Matic Valves — in all body styles, with all pilot options — are available in the 6 most popular pipe sizes: ¼", ⅜", ½", ¾", 1", and 1¼". Another *Plus Value* by Nopak. Ask your Nopak representative or write.

NOPAK VALVES and CYLINDERS

GALLAND-HENNING NOPAK DIVISION
2779 South 31st Street
Milwaukee 46, Wisconsin

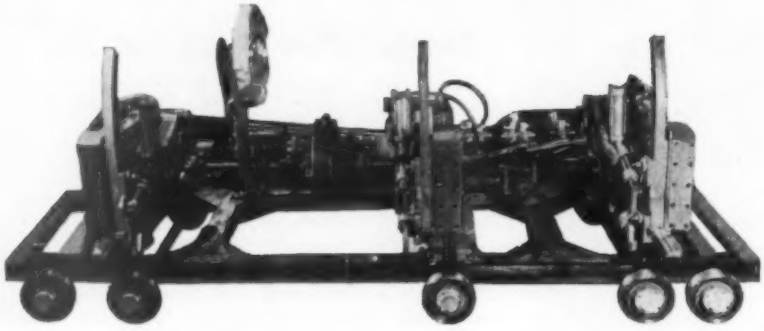
Tips From a Machinery Appraiser On How to Secure Financing

By F. J. McCANNA
Member Wood Industries, General Committee
American Society of Mechanical Engineers

The function of a machinery appraiser for the wood industries provides exposure to many of the management problems in this very competitive industry. This discussion will attempt to make available the experience of an engineer who is interested in equipment and hopeful that the new and fast developing technologies can lend some hope toward stabilizing the economies of those areas dependent on wood products.

the ORIGINAL
two-motor Carriage
Setworks Drive Unit

Prineville
Electro-Set*



READY FOR SHIPMENT.....

While most PRINEVILLE ELECTROSET* installations are made on the spot, some customers have sent their carriages to our shops for a complete overhaul. This carriage, fitted with a PRINEVILLE ELECTROSET*, also has new Prineville Blocks and Knees, and Prineville Non-Defacing Oscillating Dogs. The *great* success of the PRINEVILLE ELECTROSET* has earned it the name, "the Sawyer's Friend."

* *Patented under U. S. Patent No. 2739626*

Prineville
MACHINE & SUPPLY COMPANY

Phone—HI 7-6225 PRINEVILLE, OREGON P. O. Box 85

While the rest of the industrial United States has been occupied with pushbutton warfare and the automation to create it, the wood producing industry seems to be pricing itself out of a market that has competition from metal products.

My contacts with the "new product thinkers" lead to some optimism, if the financing required for adoption of new ideas can be made available on a prudent basis. Then we can expect a stable industry processing wood from a gradually increasing forest harvest. This will result in increased payroll dollars over present rate due to the new processes and markets that are made available.

A statement of the present problems will aid in developing the subject:

Depletion of timber: In the Northwest, this problem is due to lack of planning many years ago. Extension of access roads and other measures to increase the area under a cropping cycle have been needed. If it is going to meet competition from other areas, the industry can not afford to amortize the increasing cost of access roads in the present term of two years or less.

These roads are long term assets for fire protection, public recreation and disease control for this vital resource. Part of this cost should be shared by public bodies. This would be in the interest of stable employment and tax revenue. Also, ways must be found to make prelogging and salvage logging a greater part of the harvest.

The adoption of new processes poses a dilemma to the money lenders who must finance the large sums required. New products require many manhours in a well equipped laboratory, plus cycles and cycles of testing, to reach the commercial stage. The proper time for an operating firm to embark on a new product or process requires a seasoned engineering analysis for each firm. It should take into account the resources of working capital, mechanical and production staffs; the relation of the new product to existing production.

These factors will vary with the size of the company and depth of management. This last term means a lot to the lender. It simply infers: Can they survive the growing pains successfully?

Changes in markets: The rising costs of labor has stressed the demand for prefab, precut and ready-to-use products. Activity in this field brings the mill operator closer to the customer, who will have many details to incorporate in his ready-to-use product.

Or perhaps a new sales intermediary will develop for the small milling units. Many combinations of cull

wood and glue that can be produced for now unknown markets. Since this factor of marketing is the most risky, in financial analysis, the growing firm would do well to reserve its working capital for this area. It should get outside financing for the relatively tangible assets of equipment.

Small Operator vs. Big Operator. My experience does not confirm that the good small operator will become extinct. In surveys of mills, I have learned to respect the ingenuity, courage and flexibility of small plant owner. The successful man in this group usually combines mechanical skill with wood know-how to set the pace for big companies, (if we leave log procurement out of the picture).

I consider this group outstanding for low capital cost per unit output. The industry needs this pool of all-around talent to keep it thriving.

Very seldom does a big company stub its financial toes to the point that they need to search for financing. It comes to them because their research and resources to push new products through to the most difficult stage of finding a market assures minimum risk in lending. Their public relations programs are a benefit to the entire industry. You generally find that big company supervisors acquired their knowledge in small company operations.

Among the four problems discussed, financing new developments turns the spotlight on the appraising function. Millmen agree that log costs have reduced the milling margin to the point that the business cannot generate funds for acquisition of modern equipment. This is particularly true in areas where chip revenue is not available.

The market for capital dollars has been diverted to short term loans. High log deposits have increased the burden so that the money to extend utilization through new developments is not available on a basis of long payout.

The quest for funds through a long term loan (over 2 years) involves a mortgage of assets. This is becoming a common method. A potential source of these funds may be the investment companies to be chartered under the Small Business Act of 1958.

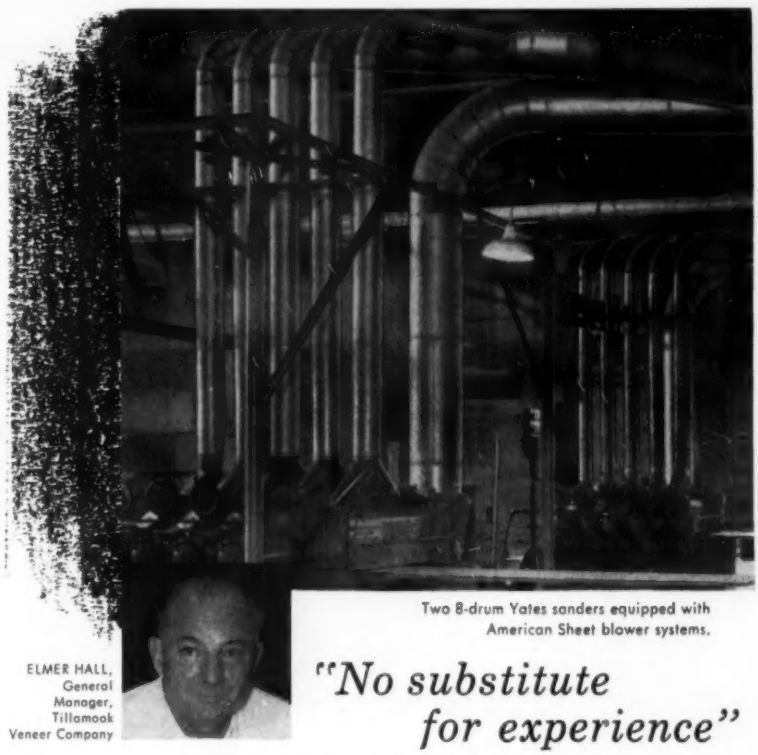
It was the intent of Congress in this act to promote the use of private capital in equity financing; in my experience a situation particularly needed in the wood plants.

The evaluating engineer will have an important part in this program since his reports will assist the lender in determining risk in a loan. To be effective this engineer will have to have a neutral position between the lender and the applicant, and well versed in technology trends. It is customary that this report be confidential between the engineer and the lender. Since these studies often determine the payroll prospects for small communities they are among the most responsible assignments available to professional men.

Most mill owners, at some time, have secured an appraisal, usually for insurance purposes. While this listing is of great help to the loan appraiser, the values can not be used since they represent the cost of replacing a destroyed property. The money lender wants two values, explained as follows:

Appraised value: A value established by an experienced and neutral observer to represent the fair capitalization of the property and equipment. It includes depreciation, measured by the current value of similar plants, as well as appreciation due to inflation. It definitely includes technical obsolescence. It reflects the skill of a good mill constructor, even though the equipment be used. I have observed more than a few mills who have an appraised value greater than their original book

(Continued on next page)



Two 8-drum Yates sanders equipped with American Sheet blower systems.

ELMER HALL, General Manager, Tillamook Veneer Company

"No substitute for experience"

"I have been doing business with American Sheet Metal Works better than 20 years, because, in building better blower systems, like anything else, there's no substitute for experience," says Mr. Elmer Hall, Tillamook Veneer's General Manager.

"American Sheet installed three blower systems at our eleven acre plant here in the blimp hangar. One picks up dust from our Yates 8-drum sanders, from the skinner and cut-off saws, and blows it 500 feet to the burner.

"The second system removes waste from our patch department to the burner. The third system removes gasses from two veneer drying ovens. These American blower systems are very efficient."

AMERICAN SHEET METAL WORKS, Inc.
Manufacturers of Blowers
920 NE Glisan Portland, Oregon BE 2-0111

American Means Efficiency

Machinery Appraisal

(Continued from page 91)

cost due to practice of "expensing" some additions. This appraised value should be near the sale price of the property, where no factor of distress motivates the seller.

Liquidating value. The harsh word for dollars realized on forced sale of assets under the auctioneer's hammer. Don't expect going values of equipment, because the lender wants that; less the machinery dealer's commission, less the auctioneer's expense. If business is low at the time he will still take a loss. Obviously this figure is the one on which the loan will be based.

Good management does not let equipment get obsolete. Salable machinery can help you finance those needed improvements.

When the loan required is close to the liquidating value, the lender takes a careful look at earnings record and the engineer's report. This is the time when good accounting pays. If land or buildings are not owned the lease must be extendable for the life of the mortgage.

.He will expect you to have a well thought out program to keep your plant competitive. This should be supported by figures. The formality of your records varies with size of firm. The lender will expect yours to meet the average. A good CPA can advise you on this.

Remember this: the lender will only place the funds of his firm where he has confidence that the management can use it well, as shown by past performance. He uses the appraisal engineer and all other sources of credit information to help him do a good job.

Tips based on cases in my file may alert management on factors that control success in securing funds:

• The owner recognized need for plant modernization, bought it on short term credit and found himself short on working capital. His program showed poor judgment in one aspect, and a long term loan was declined. Now debt is accumulating faster than income.

• Inadequate engineering on a major new installation caused production losses and depletion of working capital. Management had to convince the lender that it won't happen again.

• One-man management got spread too thin. Quality defects in product showed up that caused sales decline. Money lenders do not want to provide management assistance, so the loan was declined.

• A plant owner made good money and let his shop get obsolete. He put his large surplus in another kind of business. It failed due to lack of personal attention. His plant was too obsolete to get a loan and he lost out both ways.

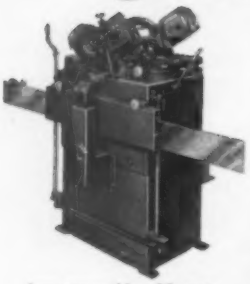
• A mill depended on federal timber, which was not available at a reasonable cost. The engineer's report showed a 40% excess of cutting capacity over allowable cut in that area. The owner liquidated his sawmill and logging machinery, and with a small loan converted the building to remanufacturing of a specialty product. The loan will be repaid. Two other mills in this area liquidated a year later with heavy losses.

•

Florida Mill Closes

Cummer Sons Cypress Co. has closed its sawmill and box factory at Lacoochee, Fla. It will close its planing and finished lumber department upon completion of processing on a stockpile of cypress lumber. The mill was one of the largest in the southeast and had operated continuously since 1923. A diminishing supply of adequate cypress and increasing production costs are cited as reasons for the closure.

Armstrong P.S.E.*



Armstrong No. 20 automatic, precision Gang Saw Sharpener.

Armstrong No. 4 automatic, precision Band Saw Sharpener.

Head Filer Ted Christofferson of J. Neils Lumber Co., Troy, Montana, at their Armstrong band saw sharpener.

*

Armstrong Precision Sharpening Equipment is one sure way to reduce costs and assure a greater profit margin. Savings on grinding wheels, grinding time, less time for parts repair or replacement, precision, uniform teeth for smoother, higher grade lumber . . . all mean additional profits. Armstrong P.S.E. *could* mean "Profits Surely Are Easier." They are easier with Armstrong precision sharpening.

Armstrong

SAW SHARPENERS — TOOLS

ARMSTRONG MANUFACTURING CO.

2135 N. W. 21st Ave., Portland 8, Oregon

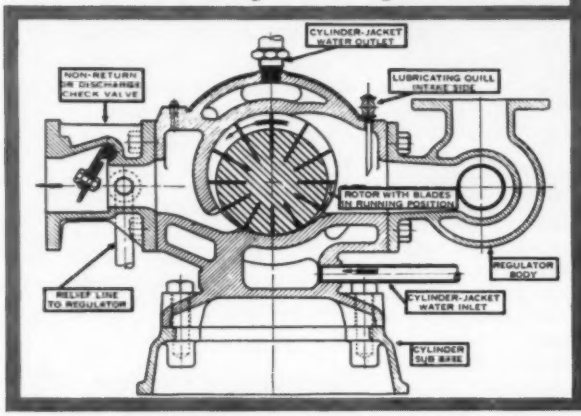
Founded in 1902 by E. P. Armstrong

Why Lumbermen Specify Fuller Rotary Compressors

1. Direct Drive
2. Blades Automatically Compensate For Wear
3. Simple Foundations

PLUS . . .

- Accessibility
- Low Maintenance
- Small Floor Space In Relation To Capacity



Fuller Rotary Compressors have extraordinary capacities in proportion to size, simple drives and remarkably few working parts. The absence of reciprocating motion results in both smooth air flow and vibration-free operation. For all of these reasons . . . Fuller Rotary Compressors are ideally suited for the lumber business. Write today for complete details.

FULLER COMPANY GENERAL AMERICA

Fuller
pioneers in harnessing AIR

1384
C-350

FULLER COMPANY
184 Bridge St., Catasauqua, Pa.
Subsidiary of General American Transportation Corporation
Birmingham • Chicago • Kansas City • Los Angeles • New York • San Francisco • Seattle

Pope & Talbot Names Raw Materials Manager

Ted R. Yocom, formerly chief forester for Simpson Timber Co., Seattle, Wash., has been named raw materials manager for all Pope & Talbot operations in Oregon and Washington.

Mr. Yocom will headquarter in Portland, Ore., and will assume overall direction of company activities extending from the woods to point of manufacture. He has also worked for Weyerhaeuser Timber Co. and Ketchikan Pulp Co.

•

Washington Mill Sold For Over $1 Million

The Fred Draper Lumber Co. at Colville, Wash., has been sold to four California lumbermen operating as the Buck Mountain Logging Co. The transaction includes 21,000 acres of deeded land and timber contracts on 3700 acres.

New owners are Jack Erickson and his father, Axel, of Eureka, who will operate the mill, and William Steinberg and A. B. McNeil of San Francisco.

The new owners say the capacity of 60,000 feet a day will be increased substantially.

Fred Draper in announcing the sale recalled "In 1924 when I moved to Colville and opened the mill I employed 15 to 20 men and figured on selling retail approximately 2 million feet of lumber yearly, possibly continuing for five or six years. Circumstances have changed logging operations to the extent that today I employ 80 to 100 men, cut 15 to 18 million feet of lumber and gypo all of my logging."

Pacific Plywood Buys Plant, Adding Warehouse Space

Recently purchased Mt. Bette Lumber Co., Dillard, Ore., has been renamed Umpqua Lumber Co. William Forest, president of Pacific Plywood, says the firm is building a new 40,000-square foot warehouse adjacent to the Pacific Plywood plant. It will be served by spur trackage, will accommodate inventory for mixed and full car shipments of plywood, lumber, hardboard and particle board products. It will double present shipping facilities.

Umpqua Lumber will produce about four carloads daily of studs, crossarms and clears. Dale Williamson, formerly head sawyer at Long-Bell Lumber Co. and Willamette National Lumber Co., is lumber division manager of the plant.

50 *husky* HORSEPOWER!

For jobs that demand *real* power, *this* is the motor—Evinrude's great "Four-Fifty." New, compact V-4 design. 70.7 cu. in. displacement. Delivers 50 solid b.h.p. at 4500 r.p.m.—easily, quietly, smoothly—in toughest day-in, day-out service. See your Evinrude dealer — he's listed under "Outboard Motors" in the yellow pages. Evinrude Motors, 4150 N. 27th Street, Milwaukee 16, Wis. *A Division of Outboard Marine Corporation. In Canada: Mfd. by Evinrude Motors, Peterborough.*

EVINRUDE
outboard motors

Plywood Processing Plant Offers Variety of Service

NEW PROCESSING PLANT contains 20,000 square feet of space. It is serviced by four railroads and is located near Port of Longview with its ample shipping and transit facilities.

Welsh Panel Co., Longview, Wash., a custom plywood processing plant, is in production. Thomas J. Welsh, president, says the operation is capable of printing, sealing, prefinishing, wood graining and V-grooving. Its wood graining of hardboard and prefinishing services will be available to plywood manufacturers, importers and independent plywood wholesalers.

Although prefinishing of hardwood plywood paneling and wood graining of hardboard will be of major interest, Mr. Welsh is planning an extensive promotion centered around prefinished exterior fir plywood and siding.

Wood Industries Conference Sets Variety of Subjects

Forest products researchers will receive the counsel of mechanical and chemical engineers at the Wood Industries Conference scheduled September 10-12 at Portland, Ore.

HARRY McKEEVER
Conference Chairman

So many sessions are set that they will occur two at a time and will extend for over two days. They will be concluded by summations from representatives of the three participating groups: American Society of Mechanical Engineers, American Institute of Chemical engineers, and the Forest Products Research Society.

Basic sessions will include:

- Research.
- New methods and equipment covering proportioning wax and resin in particle board, mechanical loading, edge and end gluing and continuous pulping.
- Management problems.
- Materials handling including inflated dunnage, automated lumber sorting, truck transportation of wood chips and use of suction cups for handling wood products.
- Chemistry in wood utilization.
- Commercialization of research results, including proving new laminated wood building products.
- Wood constructed hyperbolic paraboloids.

Final summations will be made by Conant Dodge, Weyerhaeuser Timber Co., Tacoma, Wash., for the ASME and John B. Grantham, Pacific Northwest Forest and Range Experiment Station, for the FPRS.

•

Planing Mill Planned By Utah Retailers

The Turner brothers of the Uinta Basin in Utah plan to build a $100,000 planing mill east of Heber. The Stetson-Ross equipped plant is expected to process about 10 million feet a year of rough sawn lodgepole pine from the Ashley and Uinta forests.

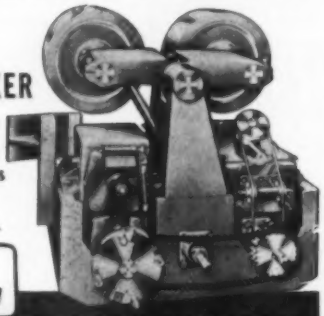
The Turner brothers, J. W. of Heber, Ben of Roosevelt and Robert of Vernal all operate building supply businesses.

NEW MOSE GORDON LUMBER CO. MILL at Commerce, Ga., replaces 9 or 10 portables which formerly handled production. This mill cuts about 40,000 feet per 9-hour day. The all-steel Butler building is 50x161 feet. The headrig is a 6-foot circular fed by a cable-driven Corley carriage. Other equipment includes an Esterer gang, 26-inch Cambio barker and 45-foot Wilco incinerator. The company also has its own kilns and planer. Mose Gordon, the owner, is also general manager. Forrest Hagen is plant superintendent.

Dress Up Your Lumber

with this MODERN END PRINTER-WAXER

Here is a compact, easy-to-install machine that will build repeat sales for you. Get our new bulletin on the subject.



Leadership SINCE 1907

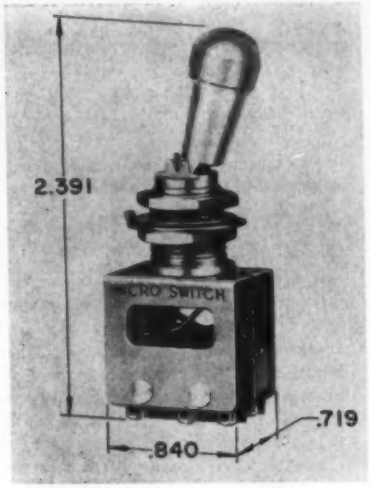
STETSON-ROSS MACHINE COMPANY INC
SEATTLE 4, WASHINGTON

significant industry news

Pages 8-12-16 of this issue

a newsletter of the forest products industry compiled every two weeks & printed alternately in

THE LUMBERMAN & THE TIMBERMAN



New Toggle Switches Require Less Panel Space

The 13AT series toggle switches developed by Micro Switch, Freeport, Ill., are pull-to-unlock units that require less behind-panel space. They feature a positive lever locking device which holds the toggle lever in a set position and requires a definite pull of approximately .090 inches to change from one position to another. Accidental toggle lever movement is prevented.

Since the toggle is oversized and has a knob on the end, changing it from one position to another is simple and fast.

The 13AT series is available in a variety of combinations, from 2-pole through 4-pole units, with or without gold contacts and/or turret type terminals.

•

Load Capacity Increased In New Fowler Loader

Model DD 44 has a capacity of 6000 pounds, can be used on a six-ton capacity or larger lift truck to load 4x4-foot lumber packages into double-door boxcars or to unload them and end-load into storage bins.

The new unit announced by Signode Steel Strapping Co. expands the Fowler line to three units. The other two: Model SD-22 with 2500-pound capacity and Model DD-33 with 4000-pound capacity.

Improvements have also been announced in the SD-22, for 2x2-foot packages in single or double-door cars, and the DD-33 for 3x3 or 4x2-foot packages in double door cars. These include a quicker and stronger attachment method and tapered fork sleeves.

Finger Tip Control Eases Lift Operation

Finger tip control to substantially reduce driver fatigue and torqmatic transmission to eliminate gearshift guesswork are features of the Gerlinger Model H-40 lift truck exhibited at the recent Material Handling Exposition by Towmotor Corp.

Other Gerlinger units shown included a 9-ton unit featuring wide-angle steering which permits rear steer wheels to follow tracks made by the front drive wheels for all weather traction and a compact Model 12-RH, 6-ton load carrying unit with full visibility and torsion bar suspension.

The wide line of Towmotor equipment was also displayed at the exhibit.

•

Stephen Hall Purchases Stetson-Ross Machine

Stephen J. Hall, recently resigned as vice-president of Simpson Timber Co., has purchased Stetson-Ross Machine Co., Inc., Seattle, Wash. Mr. Hall, who becomes president and general manager of the pioneer planing mill machinery manufacturing firm, says no personnel changes are contemplated.

S. J. HALL

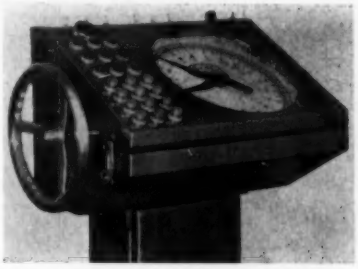
George Dickson will continue as vice-president assisted by Chandler W. Jones in sales. Also continuing with the firm are field representatives W. A. Jones in northern and central Oregon and southwest Washington, John B. MacFarland in southern Oregon and northern California, and George M. Dickson in British Columbia and Alberta in Canada.

Stetson-Ross was established by George W. Stetson and Harry B. Ross in 1907. Original distribution in the western states has been extended to include all the United States and other countries such as the Philippine Islands, Australia, New Zealand, Mexico and South America.

•

Western Gear Adds Firm

Western Gear Corp., Lynwood, Calif., has acquired a financial interest in Tridea Electronics, Inc., Pasadena, Calif. Tridea is basically an engineering firm working in radar, air navigation, computers, automatic landing systems, electronic countermeasures and missile guidance systems.



New Electronic Setworks Designed for All Mills

The new Model M-3LC will fit in at any mill regardless of sawbox limitations, Sel-Set Machinery Corp., Salem, Ore., reports.

A completely redesigned sawyer's control console for the M3LC has been decreased in every dimension as compared with the former M2LC models. Although smaller, the new console provides more controls, 32 in all, than the M2LC. Floor space required is only one-fifth that of former models. Leg room is practically unrestricted.

The new model has automatic presetting control for infinite settings enabling the sawyer to pre-set any backstand combination from 0 to 50 inches. The unit is dust-proof, lighted, and has self-canceling pushbuttons.

•

Dodge Adds 25:1 Series To Speed Reducer Line

An expanded line of shaft-mounted speed reducers from Dodge Manufacturing Corp. Mishawaka, Ind., includes a new 25:1 double reduction series in eight sizes. Dodge engineers have also improved design of double reduction reducers without changing their overall dimension or horsepower ratings. Both 15:1 and 25:1 gear ratios are now available in housings of identical dimensions.

Output speeds range from 12 to 400 rpm.

Giant of the new series is the TD11. Its reduction ratio is 24.73:1. It is rated at 154 hp at 75 rpm. Seven other sizes with torque arms are available in either 15:1 or 25:1 ratios along with three flange-mounted reducers.

In redesigning the reducers, Dodge engineers have devised an improved method of attaching the torque arm to the reducer case employing a saddle-type bracket for greater strength.

The 15:1 reducers supplied in the past are suitable for most application. However, the new 25:1 will give 40% lower output speeds with identical motor speeds and V-drive ratios.

PERSONALITIES

MYRON KNUDSON has been named to the sales staff of Irvington Machine Works, Portland, Ore., and Grand Rapids, Mich. He will work out of Seattle, Wash., covering western Washington and western Oregon. He was formerly with Westinghouse Electric, C. E. Klaus Co., manufacturers' agents for electrical equipment, and Louis Allis Co.

MYRON KNUDSON EUGENE WHEELER

Galland-Henning Manufacturing Co., Milwaukee, Wis., has named EUGENE WHEELER field sales manager of its Nopak division. He had previously worked in sales for a Nopak representative. He will work to promote use of Nopak valves and cylinders.

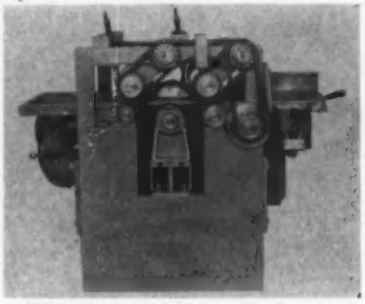
HARRY C. HOLMES has been named a sales representative for Simonds Worden White Co., Dayton, Ohio. He will serve in western Illinois and eastern Iowa.

A. N. STULL is new assistant vice-president for technical service with Borden Chemical Co. He was formerly general manager of Borden's coatings and adhesives department. In his new job he moves to North Andover, Mass.

Two key men at Salem Equipment & Supply Co. have returned to the firm, president EARL HITCHMAN reports. They are: DAN WHITESELL, left, sales manager, and RALPH STOLTZ, chief engineer. Mr. Whitesell, with the firm from 1948 to 1956, has since been engaged in sawmill construction and field engineering. Mr. Stoltz formerly served the firm for seven years.

Heavy Duty Rip Also Handles Light Work

The No. 444 rip saw introduced by Mereen-Johnson Machine Co., Minneapolis, Minn., is designed for heavy duty work but will handle even the lightest of work. It replaces the 440V rip.



With its four driven rolls the saw is capable of ripping material varying in thickness from one-quarter to 2½ inches, including bundled veneer.

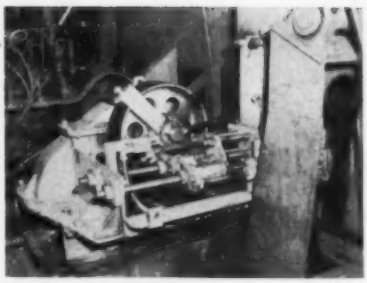
Large top rolls provide easy feeding. The feed mechanism is actuated by a separate motor drive. The improved driving mechanism permits efficient handling of material as short as 13 inches long in production line volume.

•

Pneumatic Drum Sanders Handle Irregular Shapes

Slightly inflated rubber drums provide a cushion that always keep the sanding head evenly on the surface being finished in the new Ecco No. 18 pneumatic drum sander developed by Ekstrom, Carlson & Co. The cushioning assures maximum efficiency of the abrasive and long belt life.

Drums are from 2 to 16 inches in diameter, 9 inches wide. Special size belts are available. Usually a small diameter and a large diameter drum on one machine allow operator to sand an entire piece with one handling, as illustrated. The unit has a 1200 or 1800 rpm motor, is 37½ inches high to spindle and requires a floor area 20x38 inches.



New Setworks Introduced By Sumner Iron Works

Designed for installation on any make of swmill carriage, the new Sumner patented pre-set remote controlled air-operated setworks is available for either rack and pinion, screw block or chain-type headblocks. It is powered by a radial cylinder type air motor and the pre-setting arm is operated by a bank of patented fixed stroke air cylinders, with each cylinder representing one of the common sizes being sawed.

The setting speed is approximately 20 fpm, receding speed 40 fpm. There are eight standard pre-set stations available (more if desired).

Sumner Iron Works states that the electrical circuits are simple and that any mechanic familiar with air cylinder and solenoid operated valves can perform maintenance on this setworks.

In the picture, showing the setworks with cover removed, are shown the setting ratchet wheel, the setting arm pawl cylinder, setting arm and pre-set cylinder. The setworks follows the Trout principle of operation.

The setworks system comes complete with sawyer control panel and setworks and log scale dial.

•

Pneumatic Time-Delay Relay for DC Operation

The new DC timer from Square D., Los Angeles, Calif., is only 2 15/16 x 4 27/32 inches, is rated for pilot duty applications up to a maximum of 600 volts and provides a timing period adjustable from .2 second to 1 minute.

It is a companion to the Square D Type A AC timer. Both AC and DC versions have identical mounting hole dimensions and are available for either on delay or off-delay operation. An invertible magnet structure permits in-the-field conversions from one form of operation to the other.

•

New Resin Plant Due

American - Marietta Co., Seattle, Wash., has purchased a 10-acre tract in North Richmond, Calif., on which it plans to erect a synthetic resin manufacturing plant. Construction is to start this year.

no matter how you measure it...

THE LUMBERMAN'S
29th ANNUAL PLYWOOD REVIEW

represents a real advertising "buy" to reach the entire plywood industry

WANT to get your sales message before **every** plywood, veneer and board manufacturer? Every major plywood distributor and jobber? Key builders? Leading architects? Plus hundreds of other buying and influencing contacts in all divisions of the plywood industry?

Then be sure you have sales identification in THE LUMBERMAN's 29th ANNUAL PLYWOOD REVIEW . . . to be distributed December 31, 1959. Over 25,000 copies of this Annual edition will be distributed, including THE LUMBERMAN's regular paid circulation . . . a real bonus readership at no advance in regular advertising rates.

Regardless of how you measure it, no other advertising opportunity offers such desirable coverage and industry-wide penetration of the men who make the purchasing decisions and buying policies in the plywood field.

DISTRIBUTED DECEMBER 31, 1959
ADVERTISING CLOSING DATE, Dec. 1

Make space reservation NOW for best advertising positions.

For full details write: PUBLISHING OFFICE:
731 S.W. OAK ST. • PORTLAND 5, OREGON • CApitol 2-1314

THE Lumberman

Serving industry constructively since 1902
MILLER FREEMAN PUBLICATIONS

BUYERS' GUIDE MEMO

Here's The Market Place To Buy or Sell

USED MACHINERY

✓ Take inventory of your planing mill . . . cut up plant . . . look over your molding plant . . . finishing room . . . do you have any idle or used woodworking machines to sell? The place to find a buyer is through THE LUMBERMAN'S Buyers' Guide section. Someone needs what you no longer find useful. He reads THE LUMBERMAN.

✓ Are you remodeling your headrig . . . revamping the green end . . . log deck? Don't discard the components you are replacing. Advertise them in THE LUMBERMAN. The cost is low and you stand a good chance of finding a buyer immediately.

✓ Need a job? Have you reached the top in your present position and want to put your experience to more profitable employment? Use THE LUMBERMAN'S Classified department. You might be just the man one of our readis looking for.

✓ The low cost way to advertise to the market of lumber manufacturers . . . plywood producers . . . remanufacturers . . . board manufacturers . . . and other wood producers is the Buyers' Guide of THE LUMBERMAN. It's a natural meeting place of buyer and seller **where sales are made!**

Buyers' Guide Advertising Rates

(Commissionable)

1 to 44 inches per year-----$14.00 per column inch
45 to 89 inches per year----$12.75 per column inch
90 to 179 inches per year---$11.50 per column inch
180 to 359 inches per year--$10.50 per column inch
360 or more inches per year-$10.00 per column inch

PROFESSIONAL CARDS
(Not commissionable)
All cards set in uniform style—7/8" deep by 2¼" wide. $12.00 per column inch. Special rate: $125 for 13 one-inch card insertions if paid in advance, to run within 52-week period, without copy change.

CLASSIFIED — POSITIONS & HELP WANTED
(No agency discounts on classified space)
30c per word, $7.00 minimum; $2.00 additional for box number.
60c per word for Display (Boldface) Type.

Next issue: October, closing September 11th

THE Lumberman
LUMBER PLYWOOD BOARD WOOD MANUFACTURING

Columbia Rubber Mills
Molded Rubber Products
Washers • Bushings • Gaskets • Rolls
12022 S.E. Powell Blvd.
Phone PR 4-4824
Portland 66, Ore.

W. H. RAMBO
Industrial Plant Engineer
Layout Estimates, Design, Reports, Construction Supervision
SPECIALIZING IN: Sawmills, Barking and Chipping Installations, Plywood Plants, Hardboard Plants, Woodworking Plants, Planing Mills, Power Plants and Dry Kiln Installations.
Loyalty Bldg. Portland 4, Oregon
CApitol 3-5101

Nichols Steel Boom Pond Boats

"Boom Boat" "Jet Dozer"

NICHOLS
STEEL BOOM POND BOATS
Nichols steel boom boats and tug boats, are used wherever logs are sorted, handled or towed. 16'-20'-24' boom boats. Ask about our Jet Dozer Boats.
Write for pamphlet with names of users and other descriptive matter.
Nichols Boat Works Co.
HOOD RIVER, OREGON
Phones: Shop: 6112 Office: 4284

Industrial Supply Co.
KALISPELL, MONTANA
MONTANA'S LARGEST INDUSTRIAL SUPPLIER NATIONALLY KNOWN LINES
BAND & CIRCULAR SAWS & SAW BITS
GANGSAWS AND BANDMILLS
BALL AND ROLLER BEARINGS
PLANERS, KNIVES AND CUTTER HEADS
GRAVITY ROLLS
SAW GRINDING EQUIPMENT AND GRINDING WHEELS
ELECTRIC MOTORS AND CONTROLS
V BELTS, FLAT BELTS AND LACING
AIR & HYDRAULIC VALVES & CYLINDERS
COMPLETE SAWMILL EQUIPMENT
KNIFE & SIDE HEAD GRINDERS
STEEL & CAST IRON SAWMILL CHAIN
ROLLER CHAIN AND SPROCKETS
POWER & TRANSMISSION MACHINERY
EDGERS AND TRIMMERS
WINCHES AND HOISTS
BARKERS
CHIPPERS
175 N.E. Railroad St.
KALISPELL, MONTANA
P. O. Box 473
Phone SKyline 6-5900

The PROJO INDUSTRIAL CORPORATION

OFFERS TO THE LUMBER INDUSTRY THE FOLLOWING:

MANUFACTURED PRODUCTS	*SERVICES*
Prow Carriage Drives	Design & Drafting
Veneer Drive Systems	Complete Machine Shop
Lumber Breakdown Hoists	Electric Motor Sales and Rebuilding
Carriages	Air Compressor Sales and Rebuilding
Veneer Carts	Air and Hydraulic Unit Service
Lumber Stackers	An Excellent Stock of Rebuilt Sawmill Equipment
Projo Portable Keyway Cutters	

ALL NEW AND REBUILT EQUIPMENT IS FULLY GUARANTEED

PROJO SALVAGE-SAW

MAKE 1x4, 2x2, 2x3 WITHOUT MOVING SAWS. UP TO 10M PER DAY OUT OF YOUR BURNER CONVEYOR. REQUIRES ONLY ONE MAN.

Inquiries Invited on This Unit.

GReenwood 6-6806

P.O. Box 477
GRANTS PASS, OREGON

GReenwood 6-6807

YOUR SOURCES OF SUPPLY

BUYERS GUIDE SECTION

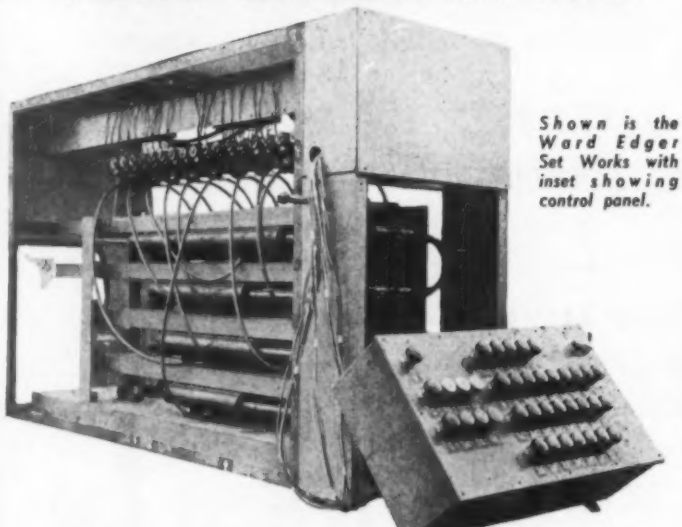
ORIGINAL SCRAG MILL BUILDER
All Types of Sawmill Equipment
Scrag Mills, Edgers, Stud Stackers, Sprayers, Plywood Oilers
for Brochure write:
KEYSTONE MACHINE WORKS
Phone OR 3-6619
P.O. Box 269 Roseburg, Oregon

FOR WILLIAMS-WHITE HOT PRESSES
ALLIED NW MACHINE TOOL CORP'N.
1222 S.E. 7th, Portland 7, Ore. BE 4-7513
PERINE MACHINERY & SUPPLY CO.
1921 1st So., Seattle, Wash. MA 2-2620
Complete Line of Machine Shop Tools—Lathes, drill dresses, saws, etc. Write for further information.

ARCHER BLOWER can "Do the Job"
• DUST COL. SYSTEMS • PNEUMATIC CHIP HANDLING SYS.
• SPECIALTY ITEMS • CUSTOM METAL FAB. • REPAIR SERVICE
SINCE 1900
Archer Blower & Pipe Co., Inc.
2 PLANTS | Portland, Ore. – 6141 S.W. Macadam – CHerry 6-3308
Seattle, Wash. – 9500 E. Marginal – PArkway 5-1945

WESTERN *TRUE STEEL SHOT PEENED*
ROLLER CHAIN SPROCKETS
AT LEADING INDUSTRIAL DISTRIBUTORS
Manufactured by
SHERIDAN GEAR and MANUFACTURING COMPANY
716 N.E. 3d Ave. Portland, Oregon

It's New!
WARD EDGER Set Works



Shown is the Ward Edger Set Works with inset showing control panel.

WARD'S CUSTOM MILL SERVICE
We are equipped to serve the lumber industry with a completely integrated service including machinery, engineering and mill construction.
M. A. WARD CONSTRUCTION CO., INC.
391 EAST 3RD DI 4-5531 or DI 5-1364 EUGENE, OREGON

ABRASIVES
The Norton Co., Worcester, Mass.; Los Angeles
Simonds Abrasive Co., Philadelphia, Pa.
ADHESIVES
American-Marietta Co., Seattle, Portland, New Westminster, B. C.
Borden Co., Chemical Division, New York City, Seattle
Monsanto Chemical Co., St. Louis, Mo.; Springfield, Mass.; Seattle, Wash.; Santa Clara, Cal.
Quaker Oats Co., Chemical Division, Chicago, Ill.
Reichhold Chemicals, Inc., White Plains, N. Y.; Seattle; San Francisco; Port Moody, B. C.
AIR COMPRESSORS—AIR TOOLS
Gardner-Denver Co., Quincy, Ill.; Seattle; Portland; San Francisco; Denver, Colo.; Dallas, Texas
Portland Machinery Co., Portland, Ore.
AIR CYLINDERS & VALVES
Bobbs Air-Draulics, Inc., Ray, Portland, Ore.
AIR MOTORS
Gardner-Denver Co., Quincy, Ill.; Seattle; Portland; San Francisco; Denver, Colo.; Dallas, Texas
Salem Equipment & Supply Co., Salem, Ore.
APPRAISALS
Caldwell Machinery Co., Portland, Ore.
General Appraisal Co., Seattle; Portland; San Francisco; Los Angeles; Spokane, Wash.; Vancouver, B. C.
AUTOMATIC SETWORKS
See "Setworks, Automatic"
AXLES
Axle Division, Eaton Mfg. Co., Cleveland, O.
Rockwell-Standard Corp., Transmission Axle Division, Detroit, Mich.
BALING PRESSES
Consolidated Baling Machine Co., Brooklyn 15, New York
BARKERS
Ederer Engineering Co., Seattle, Wash.
Filer & Stowell Co., Milwaukee; Portland
L-M Equipment Co., Portland, Oregon
Nicholson Mfg. Co., Auburn, Wash.
E. V. Prentice Co., Portland, Ore.
Sumner Iron Works, Everett, Wash.; Vancouver, B. C.
Soderhamn Machine Mfg. Co., Talledega, Ala.; Portland, Oregon
BEARINGS
Bearing Sales & Service, Inc., Portland, Ore., Seattle, Wash.
Dodge Manufacturing Corp., Mishawaka, Ind.
Link-Belt Co., Seattle; Portland; San Francisco
Schafer Bearing Div., Chain Belt Co., Downers Grove, Ill.
Timken Roller Bearing Co., Canton, Ohio
BELTING and PACKING, Belt Accessories
B. F. Goodrich Co., Akron, Ohio; Portland; Seattle
Goodyear Tire & Rubber Co., Akron, Ohio; Portland; Seattle
Manhattan Rubber Div., Raybestos-Manhattan, Passaic, N. J.
Scougal Rubber Mfg. Co., Seattle, Wash.
Mechanical Rubber Goods Div.—U. S. Rubber Co., New York City, N. Y.; Atlanta, Ga.; Portland; San Francisco
BITS and SHANKS
E. C. Atkins Div. of Borg-Warner, Indianapolis, Ind.
R. Hoe & Co., New York; Portland; Birmingham, Ala.
Pacific Saw & Knife Co., Portland
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland
BLOWPIPE SYSTEMS
American Sheet Metal Works, Inc., Portland
Anderson Blowpipe & Mfg. Co., Seattle, Wash.
Archer Blower & Pipe Co., Portland, Ore., and Seattle, Wash.
California Blowpipe & Steel Co., Inc., Escalon, Calif.
Conveyair Company Ltd., Vancouver, B. C.
Medford Blowpipe Co., Medford, Ore.
Rader Pneumatics, Inc., Portland; Vancouver, B. C.
BOILERS
F. E. Balden, Portland
Seattle Boiler Works, Seattle, Wash.
BOOM and Tug BOATS
L. S. Baier and Associates, Portland
Nichols Boat Works Co., Hood River, Ore.
BRAKE BLOCKS, LININGS, DRUMS
Champion Friction Co., Eugene, Ore.
Raybestos-Manhattan Corp., Grey-Rock Div., Manheim, Pa.
World Bestos Corp., New Castle, Ind.
BRIQUETTE MACHINERY
Sumner Iron Works, Everett, Wash.
BURNERS—REFUSE
California Blowpipe & Steel Co., Inc., Escalon, Calif.
Medford Blow Pipe Co., Inc., Medford, Ore.
CARRIAGES—Riderless—automatic
The Enterprise Co., Columbiana, Ohio
Mater Machine Works, Corvallis
Mill Equipment, Inc., Seattle
Sel-Set Machinery Corp., Salem, Ore.
CARRIAGES
Albany Machine and Supply Co., Albany, Ore.
Corley Mfg. Co., Chattanooga; Portland
The Enterprise Co., Columbiana, Ohio
Filer & Stowell Mfg. Co., Milwaukee, Wis.
Klamath Iron Works, Klamath Falls, Ore.

Klamath Machine & Locomotive Works, Klamath Falls, Ore.
Klamath Machinery Co., Klamath Falls, Ore.
Mater Machine Works, Corvallis, Ore.
Mill Equipment, Inc., Seattle
Prineville Machinery and Supply Co., Prineville, Ore.
Sel-Set Machinery Corp., Salem, Ore.

CARRIERS (also see Lift Trucks)
Gerlinger Carrier Company, Dallas, Ore.
Hyster Company, Portland; Seattle
Towmotor Corporation, Cleveland, Ohio

CASTINGS, Iron, Steel, Brass
Electric Steel Foundry Co., Portland; Seattle; San Francisco; Houston, Texas; Spokane, Wash.; Eugene, Ore.
Filer & Stowell Mfg. Co., Milwaukee, Wis.
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machinery & Locomotive Works, Klamath Falls, Ore.
Link-Belt Co., Seattle; Portland; San Francisco
Western Steel Foundry Co., Seattle; Portland

CHAIN, Log Haul
Portland Chain Mfg. Co., Portland

CHAIN, Steel Roller and Malleable
Chain Belt Co., Milwaukee, Wis.; Seattle; Portland; San Francisco; Vancouver, B. C.
Jeffrey Mfg. Co., Columbus, Ohio; Seattle; Portland
Link-Belt Co., Chicago; Seattle; Portland; San Francisco
Moline Malleable Iron Co., St. Charles, Ill.; Portland; Tacoma
Portland Chain Mfg. Co., Portland; Seattle; Bellingham

CHIP HANDLING Equipment
American Sheet Metal Works, Portland, Ore.
Archer Blower & Pipe Co., Seattle and Portland
Conveyair Co., Ltd., Vancouver, B. C.
Medford Blowpipe Co., Medford, Ore.
Rader Pneumatics, Inc., Portland; Vanc., B.C.

CHIPPERS
Carthage Machine Co., Carthage, N. Y.
Filer & Stowell Co., Milwaukee; Portland
Goodman Mfg. Co., Chicago; Portland.
D. J. Murray Co., Wausau, Wis.
Soderhamn Machine Mfg. Co., Portland, Ore.; Talladega, Ala.
Sumner Iron Works, Everett, Wash.

CHIP SCREENS
Carthage Machine Company, Carthage, N. Y.
Link-Belt Co., Chicago, Seattle, Portland and San Francisco
Soderhamn Machine Mfg. Co., Portland, Ore.

CHROME APPLICATION
California Plating Works, Inc., Portland, Ore.

CLUTCHES
Dodge Manufacturing Corp., Mishawaka, Ind.

CONTROLS (air, hydraulic, electric)
Industrial Components, Inc., Portland, Oregon
Republic Electric & Development Co., Seattle
Valvair Corp., Akron, Ohio; Birmingham, Ala.; Seattle; Portland; San Francisco; Denver; Vancouver, B. C.

CONVEYORS
American Sheet Metal Works, Inc., Portland
Chain Belt Co., Milwaukee, Wis.; Seattle; Portland; San Francisco; Vancouver, B. C.
Electric Steel Foundry Co., Portland; Seattle, Spokane
The Enterprise Co., Columbiana, Ohio
Jeffery Mfg. Co., Columbus, Ohio
Link-Belt Co., Chicago; Seattle; Portland; San Francisco
Manhattan Rubber Div., Raybestos-Manhattan, Inc., Passaic, N. J.

CORROSION RESISTANCE
California Plating Works, Inc., Portland, Ore.

COUPLINGS (also see hose and couplings)
Falk Corp., Milwaukee, Wis.

CRANES, Overhead
Ederer Engineering Co., Seattle
Harnischfeger Corp., Milwaukee, Wis.

CRANES, Truck, Wagon
American Hoist & Derrick Co., St. Paul, Minn.
Baldwin-Lima-Hamilton Corp., Lima, Ohio
Bucyrus-Erie Co., South Milwaukee, Wis.
Harnischfeger Corp, Milwaukee, Wis.
Insley Manufacturing Co., Indianapolis, Ind.
Koehring Co., Milwaukee, Wis.
R. G. LeTourneau, Lonview, Tex.
Link-Belt Speeder Corp., Chicago, Ill.
Marion Power Shovel Co., Marion, Ohio
Northwest Engineering Co., Chicago, Ill.
Skagit Steel & Iron Works, Sedro-Woolley, Wash.
Thew Shovel Co., Lorain, Ohio
Washington Iron Works, Seattle, Wash.

CUTTERHEADS
Disston Div., H. K. Porter Co., Inc., Seattle, Wash.; Philadelphia, Pa.
Jones & Orth Cutterhead Co., Seattle; Memphis, Tenn.

CYLINDERS, Air and Hydraulic
Salem Equipment & Supply Co., Salem, Ore.

DECK and POND SAWS
Disston Div., H. K. Porter Co., Inc., Seattle, Wash.; Philadelphia, Pa.
Kliever Machine Shop, Medford, Ore.
L-M Equipment Co., Portland, Ore.
Schurman Machine Works, Woodland, Wash.

DECK MACHINERY
Klamath Machinery Co., Klamath Falls, Ore.

ANDERSON BLOWPIPE & MFG. CO.

BLOWER SYSTEMS FANS DUST CONTROL
INCINERATORS SPECIALTY ITEMS

5960 4th Ave. S.
Seattle 8, Wash.
PArkway 2-4844

1213 Mitchell Rd.
Vancouver, B. C.
ELliot 4422

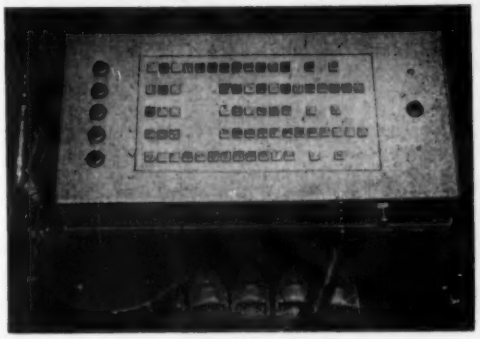
SEATTLE
3628 East Marginal Way
MAin 8629

NORTHWEST CHAINS & SPROCKETS INC

PORTLAND
31 N. W. 1st Avenue
CA 8-3367

JEFFREY MFG. CO. • WHITNEY CHAIN CO.
FABCO FLEXIBLE COUPLINGS • AMERICAN PULLEY CO.
EBERHARDT-DENVER Speed Reducers

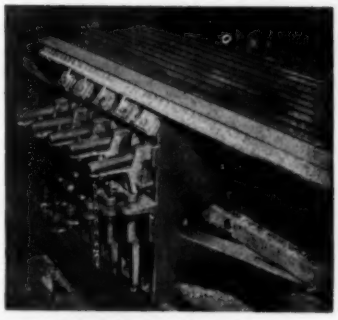
PUSH BUTTON AUTOMATION



This Control Panel
and the C & D Setworks
Equals Edger and Resaw Automation

Edge and Resaw Faster, More Fatigue with the C & D Edger and Accurately and Reduce Operator Resaw Setworks

C & D EDGER and RESAW SETWORKS



Call or write for demonstration at YOUR MILL

manufactured by

C&D LUMBER CO.
MACHINERY DIVISION

Riddle, Oregon Phone 2711

Dealer in Canada: Canadian Sumner Iron Works Ltd., 3550 E. Broadway, Vancouver 12, B.C.

PHELPS BROS.

Refuse Burners
Blow Pipe Systems

1885 Highway 99 North
Eugene, Oregon
DI 4-5821

Phelps Burners, Ltd.
P O. Box 188 Williams Lake, B.C.

"The Right Key" to Stop Tramp Metal Damage in Chippers and Hogs

RENS *electronic* **metal detector**

Rens Manufacturing Company
1646 Willamette Street Eugene, Oregon

SELECT-TRONIX

Automatic Carriage Setworks
gives you *"The Best"*

"We looked at them all and picked the BEST" says F. G. "Franny" Armstrong, Head Sawyer at Kingsley Lumber Company, Portland, Oregon.

We offer your choice —

1. A completely engineered and installed package with any number of predetermined sets—(even pre-set back stand if you wish)—Constant running 2-motor heavy duty gearbox—instant-acting electric clutch and brake control.
2. Do-it-yourself Kit with any or all component parts assembled, ready for simple installation with complete instructions.
3. Conversion of your existing equipment applies especially well with ANDRUS and many other setworks.
4. All with prompt delivery and realistic prices.

ACT TODAY—Phone or write for details how ***SELECT - TRONIX*** will make money for **YOU**

Your **SELECT-TRONIX** *Exclusive Distributor*

The Portland Machinery Company

208 S.W. First Ave. Portland 4, Oregon CA 8-9633

"serving Northwest Industry since 1900"

DRIVES
Dodge Manufacturing Corp., Mishawaka, Ind.
Republic Electric & Development Co., Seattle
Western Gear Corp., Lynwood, Calif.; San Francisco; Seattle; Portland; Spokane; Denver; Houston; Dallas, Texas

DRY KILNS and DRIERS
Bio-R-Dry, Inc., Portland, Ore.
Heat & Control, Inc., San Francisco (Conversion System)
C. M. Lovsted & Co., Inc., Seattle, Wash.
Medford Blowpipe Co., Medford, Ore.
Moore Dry Kiln Co., North Portland, Ore.; Jacksonville, Fla.
Oregon Dryer Co., Portland, Ore.
Standard Dry Kiln Co., Indianapolis, Indiana & Portland, Ore.
Vollmer-Werke Maschinenfabrik, GmbH, Dusseldorf, Germany; Portland, Ore.; Hawthorne,, Calif.; Hamilton, Ontario.

EDGE GLUING
Design Mfg. Co., Portland, Ore.
Ederer Engineering Co., Seattle, Wash.
Elliott Bay Plywood Machines, Seattle, Wash.
Mann-Russell, Inc., Tacoma, Wash.
E. V. Prentice Machinery Co., Portland, Oregon
Stetson-Ross Machine Co., Seattle, Wash.

ELECTRICAL EQUIPMENT, Motors, etc.
Brook Motor Corp., Chicago, Ill.; Portland, Oregon
Northwest Syndicate (Mann-Russell), Tacoma, Wash.
Portland Machinery Co., Portland, Ore.
Republic Electric & Development Co., Seattle
Square D Company, Los Angeles, Calif.
Weaver Co., Charles, Detroit
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

ELECTRIC DC DRIVES
Republic Electric & Development Co., Seattle, Wash.; Peoria, Ill.; Vancouver, B. C.
Zidell Machinery & Supply Co., Portland, Ore.

END PRINTERS
Irvington Machine Works, Portland
Stetson-Ross Machine Co., Seattle

ENGINES, Gas and Diesel
Allis-Chalmers Mfg. Co., Buda Division, Chicago; Dallas, Tex.; San Francisco; Houston, Tex.
Caterpillar Tractor Co., Portland; Seattle; San Francisco, Peoria, Ill.
Cummins Engine Co., Columbus, Ind.; Seattle; Portland
Detroit Diesel Engine Div., General Motors Corp., Detroit, Mich.
Ford Motor Co., Dearborn, Mich.
Harnischfeger Corp., Crystal Lake, Ill.
Industrial Div., Chrysler Corp., Trenton, Mich.
International Harvester Co., Chicago; Portland; Seattle, San Francisco
Murphy-Diesel Co., Milwaukee,Wis.
Waukesha Motor Co., Waukesha, Wis.; Los Angeles; Tulsa, Okla.
White Motor Co., Cleveland, Ohio

ENGINEERS, Forestry-Mill-Industrial
Industrial Development Co., Tacoma, Wash.
W. H. Rambo, Portland, Ore.
William K. Stametz, Jr., Engineering, Columbiana, Ohio
Timberman's Engineering Co., Portland, Ore.

FANS & BLOWER SYSTEMS
Archer Blower & Pipe Co., Portland, Ore. and Seattle, Wash.

FILES
E. C. Atkins Div., Borg Warner, Indianapolis; Portland
Disston Div., H. K. Porter Co., Inc., Seattle, Wash.; Philadelphia, Pa.
Nicholson File Co., Providence, R. I.
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland
Spear & Jackson Ltd., Vancouver, B. C.; Eugene, Ore.

FILING ROOM MACHINERY and SUPPLIES
Armstrong Mfg. Co., Portland, Ore.
Hanchett Mfg. Co., Big Rapids, Mich.; Portland
Newman Machine Co., Inc., Greensboro, N. C.
Nielsen's Saw & Mfg. Co., Roseburg, Ore.
Samuel C. Rogers & Co., Buffalo, N. Y.
Vollmer-Werke Maschinenfabrik, GmbH, Dusseldorf, Germany; Portland, Ore.; Hawthorne,, Calif.; Hamilton, Ontario.
S. A. Woods Machine Co., Boston; Portland; Memphis, Tenn.; San Mateo, Calif.

FLOOR PLATE
Alan Wood Steel Co., Conshohocken, Pa.; Seattle; Los Angeles; San Francisco; Vanc.,B.C.

FRICTION BLOCKS
Champion Friction Co., Eugene, Ore.

GANG SAWMILLS
Corley Mfg. Co., Chattanooga; Portland
Dominion Bridge Co., Vancouver, B. C.
Gang Saw Sales, Spokane, Wash.
Jeddeloh Bros., Inc., Gold Hill, Ore.
Mill Engineering & Supply Co., Seattle, Wash.
Monarch Forge & Machine Co., Portland, Ore.
Portland Machinery Co., Portland
Soderhamn Machine Mfg. Co., Portland, Ore.
Sumner Iron Wks., Everett, Wash.
Western Steel & Supply Co., Dallas, Ore.

GEARS
Sheridan Gear & Mfg. Co., Portland, Ore.

GEARS and GEAR MOTORS and SPROCKETS
Falk Corp., Milwaukee, Wis.
Link-Belt Co., Chicago; Seattle; Portland; San Francisco

Professional Services

YOUR
Professional Services card in this space will reach over 16,000 regular readers each month.

INDUSTRIAL DEVELOPMENT CO.
Dale L. Schubert, Engineering — Designers and Consultants for
HARDBOARD, CHIP & FLAKEBOARD AND OTHER WOOD UTILIZATION PLANTS
Development and mock-up facilities
3848 South Pine — TACOMA 9, WASH. — Ph. GReenfield 2-4413
Serving industry on a national and international basis

THOMPSON & HOLMBERG INC.
CONSULTANTS
Wood Working Plants
Sawmills, Veneer, Planing Mill, Wood Rooms, Barking & Chipping Installations
Terminal Sales Bldg.
Phone CApitol 8-1965 — Portland 5, Oregon

F. E. BALDEN COMPANY
Mechanical Contractors
122 S. W. First Ave.
Portland 4, Ore.
Phone: CApitol 8-5652

FOR SAWMILLS SEE
M. A. WARD
CONSTRUCTION CO., INC.
391 E. Third Avenue • Eugene, Oregon
Phone: DI 4-5531

SAWMILL CONSULTANT
and
SAWMILL BUILDER
Walter W. Warner
206 Pennsylvania Avenue
Ontonagon, Michigan — Phone No. 8F2

WM. K. STAMETS, JR.
REGISTERED MECHANICAL ENGINEER
general engineering projects
COLUMBIANA, OHIO
IVanhoe 2-2503

WESTWOOD LABORATORIES
E. Wm. Lozier, Technologist
"FINISHES FOR WESTERN WOODS"
LUMBER PRIMERS — END SEALERS
11025 S.E. Holgate Blvd. — Portland 66, Ore.
Phone PR 1-2555 — PR 4-0585

TIMBERMAN'S ENGINEERING CO.
CIVIL — MECHANICAL ENGINEERS
916 N.E. 25th Ave.
Portland, Oregon — BEImont 4-0424

J. W. Minder Chain & Gear Co., Portland; Los Angeles
Sheridan Gear & Mfg. Co., Portland, Ore.
Western Gear Corp., Lynwood, Calif.; San Francisco; Portland; Seattle; Spokane; Denver; Dallas and Houston, Texas
Western Machinery Corp., Portland

GRADE MARKING EQUIPMENT
Irvington Machine Works, Portland
Stetson-Ross Machine Co., Inc., Seattle

GRINDING WHEELS
Norton Co., Worcester, Mass.

GUIDE SETWORKS
M. A. Ward Construction Co., Inc., Eugene, Ore.

HARDBOARD plant equipment
American Mfg. Co., Tacoma; Vancouver, B. C.
Greenlee Bros. & Co., Rockford, Ill., Seattle; San Francisco; High Point, N. C.
Grenco, Inc., Seattle, Wash.; Portland
Washington Iron Works, Seattle, Wash.
California Plating Works, Inc., Portland, Ore.

HOG, CRUSHERS, PULVERIZERS
Diamond Iron Works, Chicago, Ill.
D. J. Murray Mfg. Co., Wausau, Wis.
Portland Machinery Co., Portland
E. V. Prentice Co., Portland, Ore.
Sumner Iron Wks., Everett, Wash.

HOSE and HOSE COUPLINGS
Aeroquip Corp., Jackson, Mich.; Greensboro, N. C.; Portland; Burbank and Los Angeles; Dallas, Texas
Goodyear Rubber & Asbestos Co., Portland
B. F. Goodrich Co., Akron, Ohio
Goodyear Tire & Rubber Co., Akron, Ohio.
Pacific Marine Supply Co., Seattle
Manhattan Rubber Div., Raybestos-Manhattan, Inc., Passaic, N. J.
Mechanical Rubber Goods Division, U. S. Rubber Co., New York City; Atlanta, Ga.; Portland; San Francisco

HYDRAULIC & AIR EQUIP.
Bobbs Air-Draulics, Inc., Ray, Portland, Ore.

INSTRUMENTS
Moore Dry Kiln Co., No. Portland, Ore.; Jacksonville, Fla.; Vancouver, B. C.

KILNS and DRIERS (See Dry Kilns & Driers)

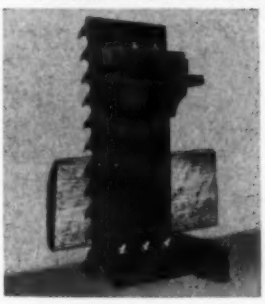
KNIFE GRINDING MACHINERY
Hanchett Manufacturing Co., Big Rapids, Mich.; Portland

KNIVES, planer, hog, veneer, chipper
E. C. Atkins Division, Borg Warner Co., Indianapolis
Cascade Saw & Tool Co., Chehalis, Wash.
Disston Div., H. K. Porter Co., Inc., Seattle, Wash.; Philadelphia, Pa.
Jones & Orth Co., Seattle
Ohio Knife Co., Cincinnati, Ohio; Portland
Pacific Saw & Knife Co., Portland
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland
Ray Smythe, Portland
Spear & Jackson Ltd., Vancouver, B. C.; Eugene, Ore.
Wapakoneta Machine Co., Wapakoneta, Ohio

MILL OWNERS — MANAGERS — SUPERINTENDENTS — FILERS

SAVE MONEY ON SAW MAINTENANCE

with this NEW Saw Guide Material



Outlasts old-fashioned material many times over. Cuts replacement costs, adjustment time, saw wear. A new moulded fabric that's long-wearing, non-frictional . . . won't score or burn saws. This amazing material won't chip, crack, break or warp . . . unaffected by weather changes. Satisfaction guaranteed!

Perfect for head rigs, edger pins, pressure guides, sawdust shear. Can be threaded, machined and cut to any shape.

Gatke QUALITY

DEALER INQUIRIES INVITED

Write for complete information!

POTTER-WEBSTER COMPANY
815 S.E. Oak, Portland 14, Oregon

Please send information about the new Gatke Saw Guide Material.

NAME .....

FIRM .....

ADDRESS .....

For price quotation, send sketch with dimensions

MILL OWNERS — MANAGERS — SUPERINTENDENTS — FILERS

CHAMPION friction blocks to fit your MACHINE

CHAMPION

To get the best from your equipment always ask for CHAMPION!

FRICTION BLOCKS • BRAKE LINING
BRAKE BLOCKS

Have You received your sample of E-Z GLIDE Saw Guide Stock?

CHAMPION FRICTION CO.

2375 7th Place West, P.O. Box 508, Eugene, Ore. Telephone: DI 3-8831, Emergency: DI 4-7591

Here's What One User Says About the LOG BRONC

Bruce Berrey, pond foreman, Willamette National Lumber Co., Foster, Oregon, writes: ". . . . With the Log Bronc we sorted the logs—sawmill fir, sawmill hemlock, white pine, cedar, peelable fir to the sawmill and peelable fir to the cold deck . . . **and one man did the job.** This was a six-way sort, but we did the job and kept up our peak day, which was 147 truck loads of logs.

"We have just ordered our second Bronc. We have decreased the number of men required to operate the pond and lowered the cost of our operation greatly."

All steel welded construction for the toughest jobs. High powered outboard motor mounted for full 360 degree turns without reversing enables boat to push from all sides. Works in rivers, lakes, tidewater or ponds. Will save its cost in 90 days report many owners.

U. S. Patent No. 2844120
Canadian Patent No. 727678

NELSON LOG BRONC CO. *WRITE FOR ACTION MOVIE*

P. O. BOX 692 COOS BAY, OREGON COngress 7-2928

Shop Telephone: Call COngress 7-9262, Coos Bay, Oregon

KNOT SEALERS
Western Machinery Corp., Portland, Ore.

LIFT TRUCKS
Buda Div., Allis-Chalmers Mfg. Co., Milwaukee
Clark Equipment Co., Ind. Truck Div., Battle Creek, Mich.; Seattle; Portland; San Francisco
Gerlinger Carrier Co., Dallas, Ore.
Hyster Company, Portland; Seattle
Hyster Sales Co., Portland, Oregon
Towmotor Corporation, Cleveland, Ohio
Yale & Towne Mfg. Co., Philadelphia, San Francisco

LOG HAULS
Klamath Machinery Co., Klamath Falls, Ore.

LOG STACKERS
R. G. LeTourneau, Inc., Longview, Texas
Caterpillar Tractor Co., Portland; San Francisco; Seattle; Peoria, Ill.
International Harvester Co., Chicago; Portland

LUMBER CARRIERS AND LIFT TRUCKS (See "Lift Trucks" & "Carriers")

LUMBER CONVEYORS
Lawson Stacker Co., Memphis, Tenn.

LUMBER FINANCING
Douglas, Guardian Warehouse Corp., New Orleans; Portland; Los Angeles; San Francisco

LUMBER STACKERS, UNSTACKERS, LOADERS AND HOISTS
Lawson Stacker Co., Memphis, Tenn.
Lovsted & Co., Inc., C. M., Seattle, Wash.
Moore Dry Kiln Co., Vancouver, B. C.; Brampton, Ont.; Jacksonville, Fla.; North Portland
Stetson-Ross Machine Co., Seattle

MACHINERY APPRAISALS
Caldwell Machinery Co., Portland, Ore.

MACHINERY LIQUIDATORS
Clyde Carroll Machinery Co., Portland, Ore.

MOISTURE METERS & CONTROL EQUIPMENT
Laucks Sentry Products, Seattle, Wash.

MOTORS — AC
Bartlett Electric Co., Salem, Ore.
Zidell Machinery & Supply Co., Portland, Ore.

MOTORS—DC VARIABLE SPEED
General Industrial Electric Co., Portland, Ore

OILS and LUBRICANTS and FUELS
Calor Gas Co., San Francisco
General Petroleum Corporation, Los Angeles; San Francisco; Seattle
Lubriplate Division, Fiske Bros. Refining Co., New York City
Richfield Oil Corp., Los Angeles
Shell Oil Co., Portland; Seattle; Tacoma; Spokane; San Francisco; Vancouver, B. C.
Standard Oil Co. of California, San Francisco
Suburban Gas Service — Propane — Seattle, Wash., Portland, Ore.; Redi-Gas—Propane—Tacoma, Wash.
The Texas Corporation, New York City
Tidewater Associated Oil Co., San Francisco
Union Oil Company, Los Angeles

OUTBOARD MOTORS
Evinrude Motors, Milwaukee, Wis.
Johnson Motors, Chicago, Ill.

PAPER PRODUCTS
Crown-Zellerbach Corp., Portland; San Francisco; Seattle

PETROLEUM—LIQUID
Suburban Gas Service — Propane — Seattle, Wash., Portland, Ore.; Redi-Gas—Propane—Tacoma, Wash.

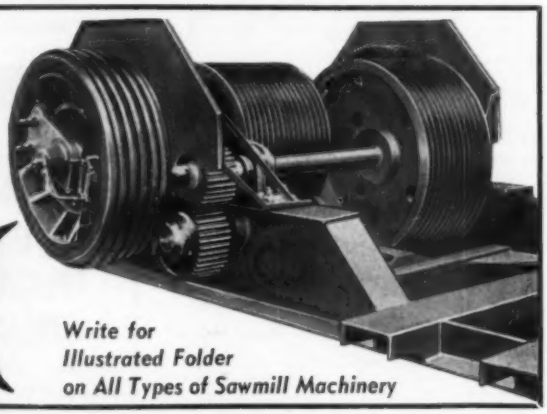
PIKE POLES—ALUMINUM
Alloy Welding & Fabricating Co., Portland

PIPE, corrugated, culvert, welded
Armco Drainage & Metal Products, Inc., Middletown, Ohio; Berkeley, Calif.; Seattle; Spokane; Atlanta; Denver; Houston, Texas; Guelph, Ontario, Canada
Beall Pipe & Tank Corp., Portland

SALEM EQUIPMENT
MEETS ALL SAWMILL NEEDS
From a Single Machine to a Complete Sawmill
NEW — 3 LARGER MODELS OF
Salem Feed Works, #268-826 & #1030
FOR LARGE MILLS as well as for MEDIUM & SMALL MILLS
UP TO 200 H.P.

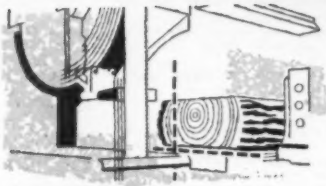
Salem Equipment & Supply Co.

EARL R. HITCHMAN, Pres.
3371 D St. N.E. • Salem, Oregon
PHONE Empire 4-6727



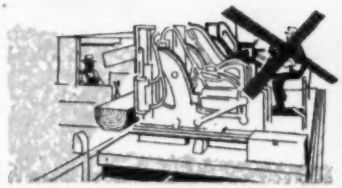
Write for Illustrated Folder on All Types of Sawmill Machinery

5 Big Reasons Why You Should Get the Story on What SELECTRIC® Sawyer-Controlled Setworks Can Do for You

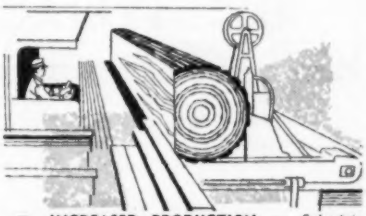


1. IMPROVED ACCURACY — Selectric incorporates from four to twenty-four or more of the most frequently used cuts in a finger-tip controlled preset system that eliminates virtually all manual guesswork in setting.

2. BETTER GRADE RECOVERY — Selectric, through pin-point accuracy and improved sawyer concentration, assures maximum yield of choice grade lumber from costly logs.

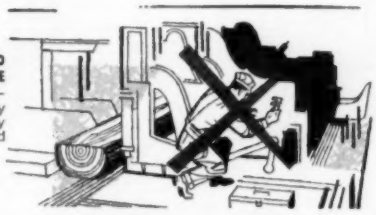


3. LOWER OPERATING COSTS — Selectric can slash operating costs up to $5,000 per shift per year on each headrig through labor savings alone.



4. INCREASED PRODUCTION — Selectric efficiency, accuracy and performance uniformity achieve production increases up to 15% by supplying more and better stock for all other operations in the finished lumber production cycle.

5. REDUCED MAINTENANCE — Selectric ruggedness and simplicity of design substantially cut maintenance and downtime costs.



GET THE FACTS ON SELECTRIC IN THIS NEW BROCHURE

If you are currently planning, or anticipate future conversion of carriage equipment to sawyer-controlled setworks operation, this information will show you how Selectric can fit into your production picture for profit.

WRITE FOR YOUR FREE COPY TODAY

MILL EQUIPMENT, INC.

5219 First Avenue South **Seattle 8, Wash.**

Gentlemen:

Please rush me a copy of the new 8-page brochure telling how Selectric sawyer-operated setworks can fit into our operation.

Name .....

Company .....

Address .....

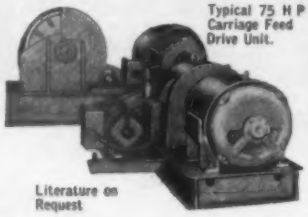
City ..... State .....

Linn GEAR COMPANY

Phone Alpine 8-6454
P.O. Box 397,
Lebanon, Oregon

TWX 578
Lebanon, Oregon

MANUFACTURING ROLLER CHAIN SPROCKETS - SPUR GEARS



Typical 75 H P Carriage Feed Drive Unit.

Literature on Request

ZIDELL ELECTRIC DRIVES

Provide rugged D.C. variable speed performance for . . .

Carriages, Feed Roll Systems, Veneer Lathes, Tray Systems, Conveyors, Machine Tools, Etc.

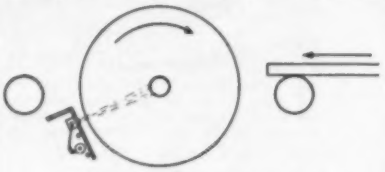
ZIDELL MACHINERY & SUPPLY CO.
3121 S.W. MOODY STREET, Portland 1, Ore.

Distributors for: Delco & Brook Electric Motors Cutler-Hammer Controls

THE MOST ECONOMICAL . . .

ONLY 5 PINTS PER DAY—(4 Spray)

What Goes on the Arbor Stays on



ORIGINAL PROVEN

EDG-O-MATIC SPRAY EDGER OILER

Patent Pending

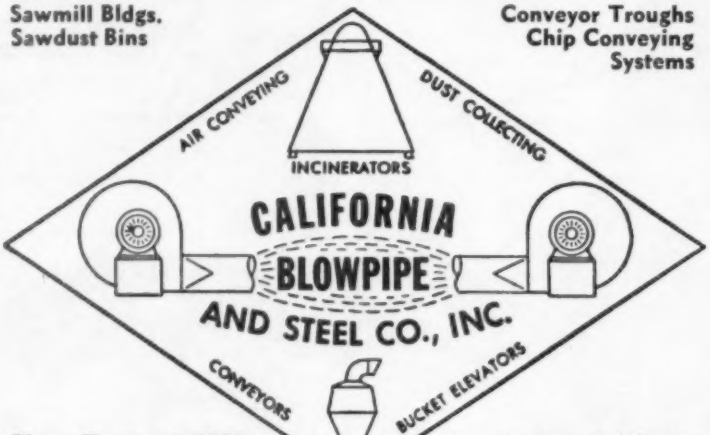
Over Fifty in Service . . . Free Folder

INDUSTRIAL SERVICE CO.

P. O. Box 863 Sacramento, California

Sawmill Bldgs.
Sawdust Bins

Conveyor Troughs
Chip Conveying Systems



Phone Terrace 8-7323

Escalon, California
(near Stockton)

ALBANY
THE BEST FOR LESS

Other Albany products we manufacture:
Random Length Trimmers —— Air-Lift Overhead —— Air-Lift Undercut, Wheel Type ——Selective & Automatic Overhead —— Resaws —— Line Bars —— Chain Drive Trimmer —— and other Sawmill Machinery.

ALBANY MACHINE & SUPPLY CO.
Telephone WAbash 8-9441 • Albany, Oregon
Re'ne Fritz, Manager

ALBANY BAND MILL AND CARRIAGE AT POST FALLS

PLANING MILL MACHINERY & EQUIPMENT
The G. M. Diehl Machine Co., Inc., Wabash, Ind.
Greenlee Bros. & Co., Rockford, Ill.; Seattle; San Francisco; High Point, N. C.
Irvington Machine Works, Portland
Mereen-Johnson Machine Co., Minneapolis, Minn.
Newman Machine Co., Inc., Greensboro, N. C.
Portland Machinery Co., Portland, Ore.
Stetson-Ross Machine Co., Inc., Seattle
S. A. Woods Machine Co., Boston; Portland; Little Rock, Ark.; Memphis, Tenn.; San Mateo, Calif.
Yates-American Machine Co., Beloit, Wis.; High Point, N. C.; Memphis, Tenn.; Portland

PLYWOOD and VENEER MACHINERY and SUPPLIES
American Mfg. Co., Tacoma, Wash.; Vancouver, B. C.
Ardies Machy. & Sales Co., Portland, Ore.
Chas. F. Bamford, Portland, Ore.
Clyde Carroll Machinery Co., Portland, Ore.
Coe Mfg. Co., Painesville, Ohio; Portland
Columbia Press Div., Lodge & Shipley, Hamilton, Ohio
Conway & Fields Sales Co., Portland
Durand Machine Works, New Westminster, B. C.
Elliott Bay Plywood Machines Co., Seattle
Elford & Early, Inc., Portland, Ore.
Ederer Engineering Company, Seattle
Globe Manufacturing Co., Tacoma, Wash.
Greenlee Bros. & Co., Rockford, Ill.; Seattle; San Francisco; High Point, N. C.
Heat & Control, Inc., San Francisco (Conversion System)
Jackson Industries, Birmingham, Ala.; Portland
Kenton Machine Works, Portland, Oregon
Kimwood Machine Co., Cottage Grove, Ore.
L-M Equipment Co., Portland
Lamb-Grays Harbor Co., Hoquiam, Wash.
Lawrence Machine & Mfg. Co., Seattle
Mattison Machine Works, Rockford, Ill.
Merritt Solem Corp., Lockport, N. Y.
Moore Dry Kiln Co., Portland
Mereen-Johnson Co., Minneapolis
Northwest Syndicate (Mann-Russell), Tacoma, Wash.
Peninsula Iron Works, Portland
Portland Iron Works, Portland
E V Prentice Company, Portland
Reichhold Chemicals, Inc., New York City
Republic Electric & Development Co., Seattle
Siempelkamp Co., Krefeld (Germany)
Skoog Engineering Co., Olympia, Wash.
Solem Machine Co., Rockport, Ill.
Star Machinery Co., Seattle, Wash.
Veneer Machines Div., Jackson Industries, Birmingham, Ala.
Washington Iron Works, Seattle, Wash.
Wapakoneta Machine Co., Wapakoneta, Ohio
Western Machinery Corp., Portland
Wilco Machine Works, Memphis, Tenn.
Williams—White & Company, Moline, Ill.
R. D. Wood Company, Philadelphia, Pa.
Yates-American Machine Co., Beloit, Wis.; High Point, N. C.; Memphis, Tenn.; Portland

POND BOATS
Nelson Log Bronc Co., Coos Bay, Oregon
Nichols Boat Works, Hood River, Ore.

POWER PLANT EQUIPMENT
Seattle Boiler Works, Seattle

PRESSES, hydraulic, hot plate, cold
Allied Northwest Machine Tool Corp., Portland
Columbia Division, Lodge & Shipley Co., Hamilton, Ohio
Star Machinery Co., Seattle, Wash.

Washington Iron Works, Seattle
Williams White & Co., Moline, Ill.
R. D. Wood Company, Philadelphia, Pa.

RADIO and RADIO EQUIPMENT
Motorola Inc., Chicago, Ill.

REFUSE BURNERS
Anderson Blowpipe & Manufacturing Co., Seattle
Archer Blower & Pipe Co., Portland, Ore., and Seattle, Wash.
Phelps Bros., Eugene, Ore.
Seattle Boiler Works, Seattle

ROLLS, rubber
Columbia Rubber Mills, Portland
Kenton Machine Works, Portland

RUBBER SPECIALTIES
Columbia Rubber Mills, Portland
Raybestos-Manhattan, Inc., Manhattan Rubber Div., Passaic, N. J.
Scougal Rubber Mfg. Co., Seattle
Kenton Machine Works, Portland

SAPSTAIN APPLICATORS
Keystone Machine Works, Roseburg, Ore.

SAW GUMMERS
Norton Co., Worcester, Mass.

SAWS, SAW CHAINS, KNIVES, CUTTERHEADS
Atkins Saw Division, Borg-Warner, Indianapolis, Ind.; Portland; Seattle; Los Angeles; Chattanooga, Tenn.
Caldwell Machinery Co., Portland, Ore.
R. Hoe & Company, New York City; Seattle; Birmingham, Ala.; Portland
Jones & Orth, Seattle; Memphis
Ohio Knife Company, Seattle; Portland; Oakland; Cincinnati
Pacific Saw & Knife Co., Portland; Los Angeles
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland
Spear & Jackson Ltd., Vancouver, B. C.; Eugene, Ore.

SAW GUIDES
Champion Friction Co., Eugene, Ore.

SAW SHARPENING MACHINERY, swages, tools, etc. (See Filing Room Machinery)

SAWMILL MACHINERY and EQUIPMENT
Albany Machine and Supply Co., Albany, Ore.
Caldwell Machinery Company, Portland
Clyde Carroll Machinery Co., Portland, Ore.
Corley Mfg. Co., Chattanooga, Tenn.
Dominion Bridge Co., Ltd., Vancouver, B. C.
The Enterprise Co., Columbiana, Ohio
Electric Steel Foundry Co., Portland; Seattle, San Francisco; Houston, Texas; Eugene, Ore.; Spokane, Wash.
Filer & Stowell Co., Milwaukee; Portland
Goldstein & Bloch, Aberdeen, Wash.
Irvington Machine Works, Portland
Jeddeloh Bros., Gold Hill, Ore.
Keystone Machine Works, Roseburg, Ore.
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machine & Locomotive Works, Klamath Falls
Kliever Machine Co., Medford, Ore.
L-M Equipment Co., Portland, Ore.
Lovsted & Co., Inc., C. M., Seattle, Wash.
Mater Machine Works, Corvallis
McDonough Mfg. Co., Eau Claire, Wis.
Mereen-Johnson Machine Co., Minneapolis
Mill Engineering & Supply Co., Seattle, Wash
Mill Equipment, Inc., Seattle
Monarch Forge & Machine Works, Portland
National Machinery Sales, Gold Hill, Ore.
Newman Machine Co., Greensboro, N. C.
Portland Chain Mfg. Co., Portland; Seattle; Bellingham, Wash.

Skrag Mills, Resaws, Planers, Edgers
Feed Tables Line Bars
Breakdown Hoists
LUSTER ENGINEERING & MACHINE WORKS
3707 University Way
P. O. Box 67 Seattle 5, Wash.
Phone ME 2-1224.

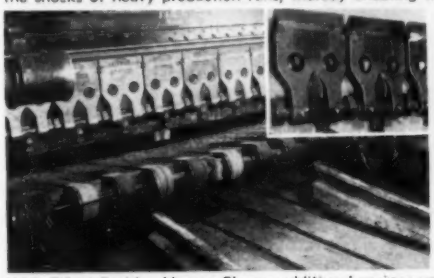
MYERS POLE SHAVERS
Electric drive with Hydraulic head lift and Pole feed controls. Also skid mounted for engine driven portable use in the woods.
Claude Myers **Troy, Montana**

POWER PLANT EQUIPMENT
Turbines • Boilers • Diesels—Any Size
Write for Prices Giving Your Requirements
CHARLES WEAVER CO., INC.
19701 James Couzens Highway • BR 3-1900 • Detroit 35, Mich.

NEW! ELFORD POSITIVE VENEER KNIFE CLAMP

CUTS COSTS, BOOSTS OUTPUT

Elford Positive Veneer Knife Clamps quickly pay for themselves in better, more uniform cuts, reduced grinding costs, reduced knife costs, and reduced downtime. Especially designed to absorb the shocks of heavy production runs, thereby enabling the knives to cut faster and last longer.



- FAST KNIFE CHANGING–quick cam action reduces downtime.
- REDUCED MAINTENANCE – no adjustments necessary after initial setting.
- REDUCED KNIFE COSTS – positive clamping action allows use of thinner, less costly knives.

Elford Positive Clamp with exclusive Cam Action!

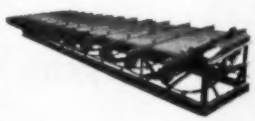
With Elford Positive Veneer Clamps additional savings can be realized through the faster and more efficient control of production—eliminates running with dull or knicked knives. Elford clamps hold knives securely with uniform pressure, insuring the best performance possible in veneer operations. No special equipment necessary for installation or maintenance. Sold by most leading machine manufacturers.

Manufactured and Distributed by
ELFORD & EARLY, INC.
2929 N.E. Alberta
P.O. Box 708, Portland 7, Ore.
Phone AT 4-3457

WRITE FOR INFORMATION ON ANY OF THESE MONARCH MACHINES

Monarch 5 to 9-ft. Bandmills

TRIMMERS
Overhead or undercut models



CHIP CONVEYOR

LIVE LOG DECK
With Log Turner and Stop and Loader

4" - 6" - 8" - 10" - 12"
STUB EDGERS

Monarch
Forge & Machine Works, Inc.

To: MONARCH FORGE & MACHINE WORKS, Inc.
2130 N. W. York St., Portland 10, Ore.
Telephone: CApitol 7-0631

Gentlemen: Please send me your descriptive literature on the machines I have listed.

NAME_____

ADDRESS_____

QUICK CHANGE CHUCK
For Veneer Lathes

U. S. Patent 2879816

Adapter hub stays on the spindle. Lightweight plates are easy to change. Installed on your lathe on free trial basis.

See for yourself why major plywood plants use Humboldt Quick Change Chucks.

Call Collect for free 30 day trial installation.

HUMBOLDT
Machine Works

937 - 10th st. Arcata, Calif.
Phone: VAndyke 2-2928

CALDWELL MACHINERY CO.
"NOPAK"—CYLINDERS & VALVES
Air, Oil & Water Hydraulic
"NOPAKMATIC" — SOLENOID VALVES
STERLING ELECTRIC MOTORS
MACHINERY APPRAISALS
738 N.W. Glisan — Portland 9, Oregon
CA 6-3568

SEATTLE REFUSE BURNERS

Prefabricated For Easy Erection

Send for Catalog No. 11

- BOILERS—NEW & USED
- TANKS, STACKS, CONVEYORS
- CUSTOM FABRICATION WORK

SEATTLE BOILER WORKS, INC.
Since 1889
5237 East Marginal Way • Seattle, Wash.
Phone: Day—PArkway 2-0737
Night—GLenecourt 4-5338

CARTHAGE MACHINE CO. – CHIPPERS – WOOD ROOM EQUIPT.
HEPPENSTALL CO. – ALLOY CHIPPER & HOG KNIVES
RICE BARTON CORP. – PULP & PAPER MACHINERY

RAY SMYTHE CO.
311 Park Bldg. • 729 S.W. Alder St. • Portland 5, Ore. • Phone: CApitol 3-0502-2238

SAWMILL MACHY & EQUIP. (Cont'd)
Portland Iron Works, Portland
Portland Machinery Company, Portland
Prescott Iron Works, Inc., Portland
Prineville Machinery & Supply Co., Prineville, Ore.
Salem Equipment & Supply Co., Salem, Ore.
Schurman Machine Works, Inc., Woodland, Wash.
Soderhamn Machine Mfg. Co., Portland, Ore.
Star Machinery Co., Seattle, Wash.
Sumner Iron Works, Everett, Wash.
Tyee Machinery Co., Seattle, Wash.
M. A. Ward Construction Co., Eugene, Ore.
Western Machinery Corp., Portland
Western Steel & Supply Co., Dallas, Ore.
The Wheland Company, Chattanooga, Tenn.
Yates-American Machine Co., Beloit, Wis.; High Point, N. C.; Memphis, Tenn.; Portland
Zidell Machinery & Supply Co., Portland

SAWS & SUPPLIES
Vollmer-Werke Maschinenfabrik GmbH

SCRAGG MILLS
Keystone Machine Works, Roseburg, Ore.

SETWORKS—Automatic
C & D Machine Shop, Riddle, Ore.
Klamath Machine & Locomotive Works, Klamath Falls, Ore.
Mater Machine Works, Corvallis, Ore.
Mill Equipment, Inc., Seattle
Monarch Forge & Machine Works, Portland, Ore.
Sel-Set Machinery Corp., Salem, Ore.
M. A. Ward Construction Co., Inc., Eugene, Ore.

SHINGLE MILL MACHINERY
Sumner Iron Works, Everett, Wash.

SHREDDERS
Jeffrey Manufacturing Co., Columbus

SORTERS, lumber, automatic
The Wheland Company, Chattanooga, Tenn.

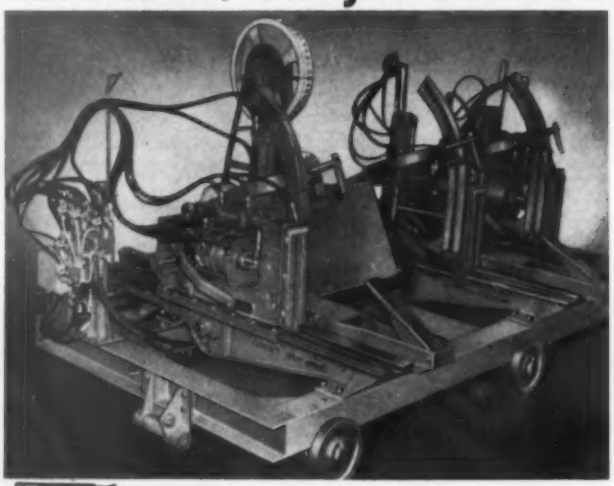
SPLITTERS, log
L-M Equipment Company, Portland, Ore.

SPEED REDUCERS
Dodge Manufacturing Corp., Mishawaka, Ind.
The Falk Corporation, Milwaukee, Wis.
Western Gear Corp., Lynwood, Calif.; San Francisco; Houston and Dallas, Texas; Seattle; Portland; Spokane

SPROCKETS and GEARS
Chain Belt Co., Seattle, Portland, San Francisco
Falk Corporation, Milwaukee; Portland
Link-Belt Co., Chicago; San Francisco; Seattle; Portland
Sheridan Gear & Mfg. Co., Portland, Ore.

KLAMATH IRON WORKS

Automatic, Sawyer-Controlled Tong Dog Carriages will cut lumber production costs in ANY plant.



Non-Defacing Tong Dogs
PROVEN ACCURACY

"Selectric" Automatic Setworks
A SIZE FOR ALL PLANTS

Klamath Iron Works Heavy Duty Tong Dog Carriage with an Automatic Sawyer Controlled "Selectric" Setworks recently installed in a large Central Oregon Plant.

KLAMATH IRON WORKS

KLAMATH IRON WORKS

ORIGINAL DESIGNER AND BUILDER
Complete Line of Sawmill Machinery

P. O. BOX 129 KLAMATH FALLS, OREGON

STACKERS, UNSTACKERS, TRANSFERS
Lawson Stacker Co., Memphis, Tenn.
Moore Dry Kiln, Portland; Jacksonville, Fla.
Stetson-Ross Machine Co., Inc., Seattle

STEEL, products, buildings, structural, industrial
Alan Wood Steel Co., Conshohocken, Pa.
Armco Drainage & Metal Products, Inc., Middletown, Ohio; Berkeley, Calif.; Seattle; Portland; Spokane; Atlanta; Denver; Houston; Guelph, Ontario

STEEL STRAPPING and STRAPPING TOOLS
Acme Steel Co., Chicago; Seattle; Portland; San Francisco; Atlanta; Spokane, Wash.
Gerrard Steel Strapping Division, U. S. Steel Corp., Chicago; Seattle; Portland; So. San Francisco; Birmingham, Ala.
Signode Steel Strapping Co., Chicago; Seattle; Portland; San Francisco; Spokane, Wash.; Vancouver, B. C.
Stanley Works, New Britain; Seattle, Portland

TIRES
Firestone Tire & Rubber Co., Akron, Ohio
General Tire & Rubber Co., Akron, Ohio; Portland
B. F. Goodrich Co., Akron, Ohio; Portland; Seattle
Goodyear Tire & Rubber Co., Akron, Ohio; Portland; Seattle
U. S. Rubber Company, New York City; Portland; Seattle

TORQUE CONVERTERS
Schneider Division of Westinghouse, Muncie, Ind.
Western Gear Works, Seattle

TRACTORS, Crawler
J. I. Case Mfg. Co., Racine, Wis.
Allis-Chalmers Co., Milwaukee, Wis.
Caterpillar Tractor Co., Portland; Seattle; San Francisco; Peoria, Ill.
Euclid Div., General Motors Corp., Cleveland, Ohio
International Harvester Co., Chicago, Ill.
John Deere Co., Moline, Ill.
Oliver Corp., Chicago, Ill.

TRACTORS, Rubber Tired
Allis-Chalmers Co., Milwaukee, Wis.
J. I. Case Co., Racine, Wis.
Caterpillar Tractor Co., Portland; Seattle; San Francisco; Peoria, Ill.
Frank G. Hough Co., Libertyville, Ill.
John Deere Co., Moline, Ill.
R. G. LeTourneau, Inc., Longview, Texas
LeTourneau-Westinghouse Co., Peoria, Ill.

TRAILERS, log and lumber
Beall Pipe & Tank Co., Portland
Peerless Trailer & Truck Service, Portland, Ore.
Reliance Trailer & Truck Co., San Francisco

TRIMMERS
Albany Machine & Supply, Albany, Ore.
Irvington Machine Works, Portland, Ore.
Portland Iron Works, Portland

NEW OR USED...
HYSTER SALES Company is the best place to buy lift trucks!

HYSTER
LIFT TRUCKS and STRADDLE TRUCKS

From 2,000 to 30,000-lb. capacities now available for immediate delivery.

As your Hyster Sales dealer, we are equipped to offer Complete Job Analysis of your lift truck needs; Complete Parts and Field Service; Modern Shop Facilities for major repairs; and our factory Trained Mechanics are field experienced to keep your equipment in top condition. Call Today.

In PORTLAND—CALL BE 4-6471
Hwy. 99E at S.E. 20th Ave.
5251 S.E. McLoughlin Blvd.
In MEDFORD—CALL SP 3-6360
654 South Grape Street
In BOISE, Idaho—CALL 3-5441

HYSTER Sales Company

FEDERAL PIPE & TANK CO.
Wood Pipe
2 inches to 16 feet diameter.
Wood Tanks
100 gallons to 500,000 gallons capacity.
6851 East Marginal Way
PArkway 2-0582 Seattle, Wash.

Stetson-Ross Machine Co., Inc., Seattle
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machine & Locomotive Works, Klamath Falls, Ore.
Sumner Iron Works, Everett, Wash.; Vancouver, B. C.

VALVES, FLANGES
Zidell Machinery & Supply Co., Portland, Ore.

VALVES, Steam, air, hydraulic
E. C. Davies, Portland, Ore.
Valvair Corp., Akron, Ohio
Western Machinery Corp., Portland

WAREHOUSING and FINANCING
Douglas-Guardian Warehouse Corp., New Orleans; Portland; San Francisco; Atlanta, Ga.; Dallas, Texas
Lawrence Warehouse Co., San Francisco

WINCHES
Hyster Company, Portland, Ore.
Pacific Car & Foundry Co., Renton, Wash.; Chicago

WOOD PIPE
Federal Pipe & Tank Co., Seattle

WOOD PRESERVATIVES
Chapman Chemical Co., Memphis, Tenn.; Portland; Palo Alto, Calif.
Dow Chemical Co., Midland, Mich.; Seattle
Monsanto Chemical Co., St. Louis, Mo.; Seattle
Reichhold Chemical Co., White Plains, New York; Seattle; San Francisco; Port Moody, Wood Treating Chemicals Co., St. Louis, Mo.; Portland

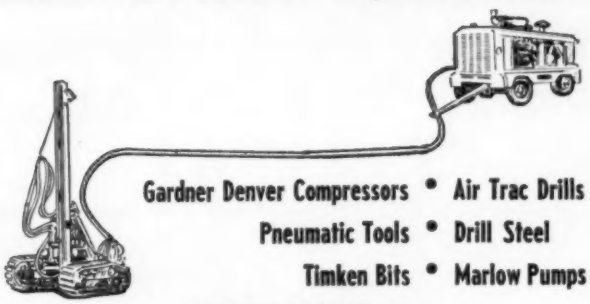
WOODWORKING MACHINERY
Greenlee Bros. & Co., Rockford, Ill.
Stetson-Ross Machine Co., Seattle, Wash.
Tyee Machinery Co., Seattle, Wash.
S. A. Woods Machine Co., Boston, Mass.; Portland, Ore.

BUYERS GUIDE SECTION

SCOUGAL RUBBER MANUFACTURING CO.
WE CAN MANUFACTURE ANYTHING OF RUBBER
2731 First Ave. So. Seattle, Wash.

GENERAL MACHINERY CO.
Offices and Shop Now located at
8900 S.E. 72nd Avenue
Portland, Oregon
(Downtown offices discontinued)
Phones: **PRospect 4-2630**
PRospect 4-3637

GMP
SALES & RENTAL SERVICE
NEW & USED EQUIPMENT



Gardner Denver Compressors • Air Trac Drills
Pneumatic Tools • Drill Steel
Timken Bits • Marlow Pumps
Wincharger Light Plants
McKiernan Terry Pile Driving Equipment
Flygt Pumps • Hiab Cranes • Wire Rope
U S Rubber Hose and Belting
Ball & Roller Bearings • V Belt & Chain Drives

GEORGE M. PHILPOTT CO., OREG., LTD.
2353 N.W. 21st • Portland, Ore. • CA 8-9327

USED MACHINERY VALUES

11-saw 24' Air Lift Portland Iron Works Planing Mill Trimmer, automatic trigger type (convertible to selective), with 8" x 24" line-up rolls with 2 HP gear reducer. 5 HP varidrive motor for steel table chains. 30 HP D.M.D. to drive shaft. Automatic lubrication. Modern unit, in excellent condition, new 1951.

4" x 32" gang edger, b.b., 25 HP
Lumber printer and waxer unit, Irvington
7' R.H. roller brg. Klamath band mill
Wickes 14" x 40" cant gang, #16
Stud mill, complete with hydraulic feedworks and "Selectric" setworks, almost new
15" Woods # 412M electric planer, dbl. profile
24" 10-knife Woods 404-CM elec. planer with rip saw arbor
20" Stetson-Ross 17-A planer, 6-knife, elec.
15" Woods #404 planer, dble. profile, belted
6" #272 Mattison electric moulder
8' plywood panel cut-off saw
Buss #55 14x30" dbl. surfacer, b.b., elec.
Diehl #750 glue joint rip saw, 20 HP
Diehl #55 straight line rip saw, 10 HP
30" Western b.b. gang rip, 25 HP
49" Yates 3-drum motorized sander
44" Mershon vertical band rip saw, b.b., 20 HP

TYEE MACHINERY COMPANY

1924 First Ave. South · Seattle 4, Washington · MUtual 2-5881 · MUtual 2-5888

MOTORS IN STOCK

Rebuilt and Guaranteed
All 3 phase, 60 cycle, 220/440-volt

SQUIRREL CAGE MOTORS

NO.	HP	RPM	NO.	HP	RPM	NO.	HP	RPM
5	1	1800	14	10	1200	1	50	1800
2	1¼	3600	10	10	900	1	50	1200
9	1½	1800	2	15	3600	3	50	900
4	2	3600	6	15	1800	2	60	1800
5	2	1800	8	15	1200	1	75	1800
1	2	1200	3	15	900	2	75	1200
3	3	3600	4	20	1800	4	75	900
15	3	1800	8	20	1200	1	75	720
8	3	1200	3	20	900	1	75	620
1	3	900	2	20	600	3	100	1800
1	5	3600	7	25	1200	3	100	1200
20	5	1800	2	25	720	1	100	900
16	5	1200	5	30	1200	1	125	900
4	5	900	2	30	900	1	150	1800
5	7½	1800	1	40	3600	1	150	1200
14	7½	1200	1	40	1800	1	150	720
4	7½	900	1	40	1200	1	150	480
1	7½	720	2	40	900	1	200	600
1	10	3600	1	40	720	1	300	720
8	10	1800						

WOUND ROTOR MOTORS—440-Volt

NO.	HP	RPM	NO.	HP	RPM	NO.	HP	RPM
1	5	1200	3	15	900	2	50	900
1	10	900	1	20	1200	1	60	1200
1	15	1200	1	50	1200	1	125	720

2200-2300 VOLT MOTORS

1 — 40 HP 2200-v, 1800 RPM 1 — 250 HP 2300-v, 1200 RPM
315 HP 600 RPM synchronous

MOTORS with GEAR REDUCERS Rebuilt and Guaranteed

3 PHASE, 60 CYCLE, 220/440-VOLT, OPS

NO.	HP	RPM	NO.	HP	RPM	NO.	HP	RPM
1	3	120	1	5	172.5	1	7½	128
2	3	125	1	5	90	1	10	143
1	3	68	1	5	23	1	10	97
1	5	143	1	5	160	1	10	154
						1	10/5 (2 speed)	57

GEARHEAD MOTORS Rebuilt and Guaranteed

3 PHASE, 60 CYCLE, 220/440-VOLT

NO.	HP	RPM	NO.	HP	RPM	NO.	HP	RPM
1	1	57	1	2	45.33	1	3	100
1	1.5	43.3	1	2	56	1	5	45
1	2	44	3	2	68	1	5	355
1	2	45	1	2	280	1	7½ (4 speed)	122
			1	3	37	1	10	102

New GEARHEAD MOTORS 3 phase, 60 cycle, 220/440-volt

NO.	HP	RPM	NO.	HP	RPM	NO.	HP	RPM
1	1	45	1	2	52	3	5	37
1	1½	45	5	3	56	4	5	45
1	2	45	1	5	39	1	10	59

CLYDE P.

CARROLL MACHINERY CO.

122 S. W. First Ave. · Portland 4, Oregon

FOR SALE! FOR PENNIES!

2 cars of 6' S2S Oak stacking sticks 4½¢ each. Phone or wire your order.

Gaiennie Wholesale Lumber,
Box 1774,
Shreveport, Louisiana.

HEADLINE BUYS FROM STAR

Check These New Arrivals!

Used #512 Newman 8"x16" ten knife ball bearing planer and matcher, extra sideheads. Good operating condition. Can be seen operating at Springfield, Oregon.

Turner Resaw, 42", single, tiltrolls, 40 HP, modern, clean.

Yates Resaw Rebuilt 54" B.B.

Woods #137M moulder—4 x 6 - 4 head, good, used

Diamond 45 Hog R.B. 40 HP Motor.

Mattison 202 Str. line rip—XL-208 Gang-ripper 20 HP.

Yates American 433 endless bed sander 43" D.M.D. spiral drums, excellent.

Vonnegut 4 x 8 - 5 head moulder, good—a real deal

Moulder—Mattison 229-8" B.B. D.M.D. 15 HP cylinder, 7½ HP sides, P.B. controls. New hi-speed brgs. on heads.

Frequency changer 120 cycle 7200 RPM-50 HP

XL mouldmatchers 2x4—late model, excellent.

Berlin 94 planer matcher 6x15.

Stetson Ross 6x15, 8 Kn. belt drive, 75 HP motor, feed table.

All items subject to prior sale or option

STAR MACHINERY COMPANY
241 Lander St. • Seattle, Wn.
E. 415 Sprague • Spokane, Wn.
3325 N.W. Yeon • Portland, Ore.

The Lumberman's Classified Advertising Section

WANTED

Live wire sales representative calling on timber industry to handle complete line of pole yard equipment: pole shavers, conveyors, live decks & related equipment. This is a well established line from the country's largest manufacturer of pole shavers. You will have lucrative replacement parts business. Protected territory to producers. If you can cover the ground and want good commission checks

contact Sam Jones, Nelson Electric Manufacturing Co. P. O. Box 5385, Tulsa, Oklahoma.

Particle Board Position Wanted

In marketing or management. Eight years experience in particle board, hardboard & lumber (quality control, research, & production). Hold BS degree in Wood Products.

Write TL Box 401, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

Young South Dakota lumberman, 13 years experience managing retail yard for same company wishes a change of climate (west coast). Healthy, married, no children. Still employed, clean record.

Write TL Box 400, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

FOR SALE

Very modern dimension plant. Latest equipment including electronic gluing and modern dry kilns. Doing approximately $1,000,000 per year with production already sold for several months to repeat customers. Raw materials plentiful. Good labor available locally, cheap. Reason for selling—other interests. Or would lease buildings and kilns to responsible party.

Write TL Box 399, c/o THE LUMBERMAN 731 S. W. Oak Street, Portland 5, Oregon

SAWMILL

Sustained yield timber (private 12 MM per year contract) Modern 50 MM Northern California dimension mill—book value. Short private road log haul. Pavement and low rate to major California markets. $250,000.00 to handle, balance terms. Complete information to qualified buyers.

Write TL Box #402, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

FOR SALE

1—Northwest Marine Iron Works 66-inch "Blue Babe" Resaw, excellent condition—$7500.00.
1—Sumner Carriage, trucks, off-set, 72" opening blocks, set-works, vee-rail, etc. $3000.00.
1—Armstrong #17 Circular Saw Grinder—$1600.00.
4—60 foot, 11 gauge, 16" band headsaws, like new, $650.00 each.
4—31 foot, 16 gauge, 10" band resaws, like new, 60% new price.
2—60 inch insert tooth cut-off saws, $600.00 each.
Many—Used (but good) 16 gauge resaws, trim saws, etc., at slightly more than plate value.
200 M—⅞"x3"x42" Kiln Sticks, good condition, $30.00 per M. pcs.
2 M—4"x4"x42" bunks (bull blocks), good condition, 20c each.

Also for Sale

Kiln trucks, electric motors, bearings, sprockets, gears, pulleys, belting, chain, small tools, etc.

Complete liquidation of sawmill supplies and equipment.

(All prices, where-is, as-is. All items subject to prior sale)

TERMS: Net cash

Special consideration to dealers

WILLIAM HULBERT MILL COMPANY

P. O. Box 1111 ALpine 2-5186
Everett, Washington

FOR SALE

Yates-Am A-62 15" P & M B D 8 K Prof
Yates-Am A-66 15" P & M Dir Elec 8 K
Yates-Am A-20 15" P & M B D 6 K Prof
Yates-Am A-20 20" P & M Dir Elec 6 K
Woods #412 15" P & M B D 8 K Prof
Woods 412 M 15" P & M Dir Elec 6 K

R. K. HASKEW & CO., INC.

Phone Amherst 6-6214 Box 4065
Chattanooga 5, Tennessee

WANTED

BOX FACTORY SUPT.

A man capable of operating a $300,000 per year operation at a profit. Have good equipment, good location, good business and need a proven, capable operator.

Box 719
Grand Junction, Colorado

GOOD MACHINERY BUYS

SAWMILL

24' wheel trimmer B.B. on steel beam
70' steel log haul conveyor
2 log hauls—330' 1½x6 chain, each
2 log kickers, 10"x22" air cylinder
Simonson Turner—2—12"x96" cylinders
2 log kickers, 14x36 cylinders
Log Stop—4 15/16" shaft, 14"x20" cyl.
Log Stop—4 7/16" shaft, 14"x20" cyl.
Gang 36"x20" stroke, "Record"
Gang 26"x20" stroke, "Record"
Edger 10x60 Phoenix, ball bearing
Slasher, 5 saw, 4' spacing
14"x18" steam feed engine geared

Motors

HP	Speed	Volts	
3	500	3600	2300 Ind.
1	400	300	2300 Syn.
1	200	1200	440 Ind.
1	200	1200	2300 Syn.
1	200	900	2300 Syn.
1	200	514	2300 Ind.
1	200	505	2300 Sr.
1	150	1800	440 Ind.
1	125	1200	440 Ind.
4	100	900	440 Ind.
1	75	1800	440 Ind.
5	75	900	2300 Ind.
1	75	720	440 Ind.
1	75	514	440 Sr.
1	40	1800	440 Ind.

CHIP MILL

Chipper, 72"—10 knife Carthage with 400 HP, 300 RPM 2300 V. Synch. Motor
4—Byron Jackson high pressure pumps 500 GPM, 2500' head

Roll Cases

Steel frames, Roller chain driven
6—10x24x2 7/16"—1½" P
5—10x30x2 7/16"—1½" P
6—10x30x2 7/16"—1½" P
7—10x60x2 7/16"—1½" P
15—6x20x1 15/16—1¼" P
10—6x20x2 3/16—¼" P Concave

Misc.

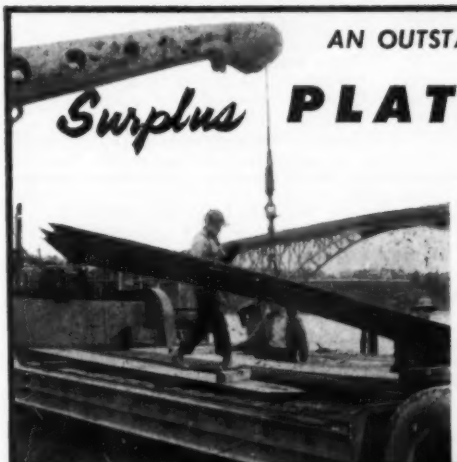
Band Rip Saw, Yates R4—54"
Worthington Twin Horiz. 2 stage, 393 cu. ft. Air compressor
IR 315 CFD air compressor, 75 HP motor 440 V w/V belt drive 368CF
IR 12x10 ER1 Air Compressor
#94 Berlin 6 knife planer 6x9
#404B Woods 6 knife planer 6x15
#207 Madison rip saw
Master S & W dragsaw, 20 HP motor
Lincoln 300 Amp gas driven welder
Ray Burner 400 HP turbine driven
2 Irvington Trim Saws #26, 3 HP Mtr., ¾ HP swing motor
#150L Covel grinder w/72" clamp

LOGGING SUPPLIES

GOLDSTEIN & BLOCH

SAW MILL MACHINERY

Phone LEnox 2-1234 P.O. Box 33 Aberdeen, Wash.



AN OUTSTANDING BARGAIN!

Surplus **PLATE STEEL**

3½¢ lb.

F.O.B., PORTLAND, OREGON

Plates Approximately 24 inches wide, by 17 feet long, in the following thicknesses:

⅜", ½", 7/16", 9/16"
⅝", 1 1/16", ¾", ⅞"

IDEAL FOR ALL MILL REPAIR AND FABRICATION JOBS.

ZIDELL EXPLORATIONS, INC.

3121 S. W. MOODY ST.
PORTLAND 1, OREGON
CAPITOL 8-8691
Contact George Irvine

THE LUMBERMAN'S Advertising Index

A

Acme Steel Co. 31
Albany Machine & Supply Co. 106
Allied NW Machine Tool Corp. 100
American Sawmill Machinery Co. 87
American Sheet Metal Works, Inc. 91
Anderson Blowpipe & Mfg. Co. 101
Archer Blower & Pipe Co., Inc. 100
Armstrong Mfg. Co. 92
Autocar Div. of White Motor Co. 19

B

Balden Co., F. E. 103
Bell Helicopter Corp., Sub. of Bell Aircraft Corp. 54
Bell Woodworking Machinery 62
Berry Hydraulics, A Div. of Oliver Tyrone Corp. 88
Borden Chemical Co., The 25

C

C & D Lumber Co. 101
C. F. Machinery Co. 79
Caldwell Machinery Co. 108
California Blowpipe & Steel Co., Inc. 106
Carroll Machinery Co., Clyde P. 110
Champion Friction Co. 104
Chapman Chemical Co. 9
Coe Mfg. Co., The 69
Columbia Rubber Mills 98
Controls & Communications Co. 74
Corinth Machinery Co. 87
Corley Mfg. Co. 17, 74

D

Dodge Mfg. Corp. 60

E

Ederer Engineering Co. 24
Ekstrom, Carlson & Co. 55
Elastic Stop Nut Corp. of America, AGA Div. 69
Electric Lighting, Inc. 13
Electric Steel Foundry Co. 7
Elford & Early, Inc. 107
Evinrude Motors, A Div. of Outboard Marine Corp. 93

F

Federal Pipe & Tank Co. 109
Ford Div. of Ford Motor Co. 65
Friden, Inc. 20
Fuller Company 93

G

Gaiennie Wholesale Lumber 110
Galland-Henning, Nopak Div. 89
Gardner-Denver Co. 22
General Machinery Co. 109
General Petroleum Corp. 27
Goldstein & Bloch 111
Gonset Div. of Young Spring & Wire Corp. 69
Greenlee Bros. & Co. 52

H

Haskew & Co., Inc., R. K. 111
Hulbert Mill Co., Wm. 111
Humboldt Machine Works 108
Hyster Co., Industrial Truck Div. Cov. 3
Hyster Sales Co. 109

I

Industrial Development Co. 103
Industrial Service Co. 106
Industrial Supply Co. 98
Irvington Machine Works 28, 69

J

Jeddeloh Bros. Sweed Mills, Inc. 48
Jeffrey Mfg. Co., The 21
Jordan International Co. 75

K

Keystone Machine Works 100
Klamath Iron Works 108
Klamath Machine & Locomotive Works, Inc. 26

L

L-M Equipment Co. 51
Lawrence Warehouse Co. 75
Lewis-Riffel, Inc. 14
Link-Belt Co. 32
Linn Gear Co. 106
Lodge & Shipley Co. 53
Lovsted & Co., Inc., C. M. 74
LUMBERMAN, THE 97
Luster Engineering & Machine Works 107

M

Machinery Sales Co. 112
Manhattan Rubber Div., Raybestos-Manhattan, Inc. 63
Mater Machine Works, Inc. 77
Mereen-Johnson Machine Co. 59
Micro Switch, A Div. of Honeywell 50
Mill Equipment, Inc. 105
Moline Malleable Iron Co. 58
Monarch Belting & Supply Co. 112
Monarch Forge & Machine Works, Inc. 107
Moore Dry Kiln Co. 79
Myers, Claude 107

N

National Mahinery Sales 48
Nelson Electric Mfg. Co. 111
Nelson Log Bronc Co. 104
Newman Machine Co., Inc. 14
Nichols Boat Works Co. 98
Northwest Engineering Co. 3
Northwest Chains & Sprockets, Inc. 101

P

Pacific Saw & Knife Co. 112
Pettibone Mulliken Corp. 57
Phelps Bros. 102
Philpott Co., Oreg. Ltd., Geo. M. 109
Portland Chain Mfg. Co. 69
Portland Iron Works, Inc. 46
Portland Machinery Co. 102
Potter-Webster Co. 103
Prentice Co., E. V. 83
Prineville Machine & Supply Co. 90
Projo Industrial Corp. 99

R

Rader Pneumatics, Inc. 78
Rambo, W. H. 98
Raybestos-Manhattan, Inc. 63
Rens Mfg. Co. 102
Republic Electric & Development Co. 6
Rockwell-Standard Corp., Transmission & Axle Div.–Det. 5

S

Salem Equipment & Supply Co. 104
Scougal Rubber Mfg. Co. 109
Schurman Machine Works, Inc. 80
Seattle Boiler Works, Inc. 108
Sel-Set Machinery Corp. 82
Sheridan Gear & Mfg. Co. 100
Signode Steel Strapping Co. 49
Smythe Co., Ray 108
Soderhamn Machine Mfg. Co. 81
Soule' Steel Co. 2
Spear & Jackson 80
Square D Co. Cov. 2
Stametz, Jr., Wm. K. 103
Standard Dry Kiln Co. 28
Standard Oil Co. of California 11
Star Machinery Co. 110
Stetson-Ross Machine Co., Inc. 94
Suburban Gas Service 1
Sumner Iron Works 56

T

Texaco, Inc. 15
Thompson & Holmberg, Inc. 103
Timberman's Engineering Co. 103
Towmotor Corp., Gerlinger Div. 29
Tyee Machinery Co. 110

U

Union Oil Co. of California 47
United States Rubber 77
U. S. Steel Supply Div. of United States Steel 18

V

Vanderbilt Co., R. T. 78
Vollmer-Werke Maschinenfabrik GmbH 17

W

Ward Construction Co., Inc., M. A. 100, 103
Warner, Walter W. 103
Weaver Co., Inc., Charles 107
Westwood Laboratories 103
White Motor Co. 19
Whitmore Mfg. Co., The 61
Wilco Machine Works, Inc. 85
Williams-White & Co. Cov. 4
Wood Co., R. D. 23
Woods Machine Co., S. A. 30
Wood Treating Chemicals Co. 85
Zidell Explorations, Inc. 111
Zidell Machinery & Supply Co. 106

While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in this index.

USED Circular Saws

Slashers — Trimmer & Head Saws, Etc.

PACIFIC SAW & KNIFE CO.

912 S.E. Stark Belmont 4-5463

Portland, Ore.

9 DIESEL ELEC LOCOMOTIVES

2—23 ton Gen Elec S & Auto Air Brakes
4—25 ton Gen Elec SA Brakes New 1952
1—25 ton Whitcomb New Never Used
2—45 ton Gen Elec S & Auto Air Brakes

STANHOPE, 60 E 42nd St. N.Y. 17, N.Y.

BUSINESS OPPORTUNITIES

Ideal acreage for fur farming and the production of Christmas Trees, on federal highway in Central Idaho National Forest, 23 Patented Lode Gold Mining Claims, about 300 acres, all tax and debt free, within one mile of P.O. and one and one half miles from school.

M. D. Jordan,
2852 Fowler Ave.,
Ogden, Utah

GOOD USED MACHINERY

Yates-American A-20, 20x8", Bkn, Elec.
S. A. Woods 404-B, 15x6", 75 hp, complete
American 24x16" Timber Sizer
Stetson-Ross 24' Wheel type trimmer
Diamond 6' Band head rig, anti-friction
Archer 72" Blower with 60 hp, like new
Sturdevent 60" Blower with 30 hp
Gerlinger Md. 4MH, 1950 carrier. A-1
Hyster R.T. 150, 1955, 14,000 cap.
Andrus Knife grinder, 32", Like new.
Andrus Side Head grinder, 7" cove wheel
Side Heads, hundreds of sets.

McDonough 54" Band Resaw, Tilt, BB
Pacific 36" Circular Resaw, Tilt, BB
Sumner No. 45 Hog, BB, Rebuilt
Norman 50", 16 knife Chipper, 3 yrs. old
Schurman 48x6" BB, Edger, 4 move Saws
Corley 27x4" BB, Table Edger, Rebuilt
Irvington undercut swing saw, No. 21
Wicks 32x8" Cant Gang, Air on rolls
Chain H-78, 124, 130, Log haul, roll top
20' All steel, 3 block carriage, air & elec.
Ederer 8 ton bridge crane, 75' span
Electric Motors, 1 to 500 H.P.

MACHINERY SALES COMPANY

2233 First Ave. South • Seattle 4, Washington • MAin 3-1000

"A Quarter Century Serving the Lumber Industry"

ASSIGNEE SALE

Sold for the Benefit of the creditors

MONARCH BELTING & SUPPLY CO.

61 S. W. 2nd Ave. Portland 4, Oregon

RUBBER HOSE
fire, high pressure, gas, water, suction, steam

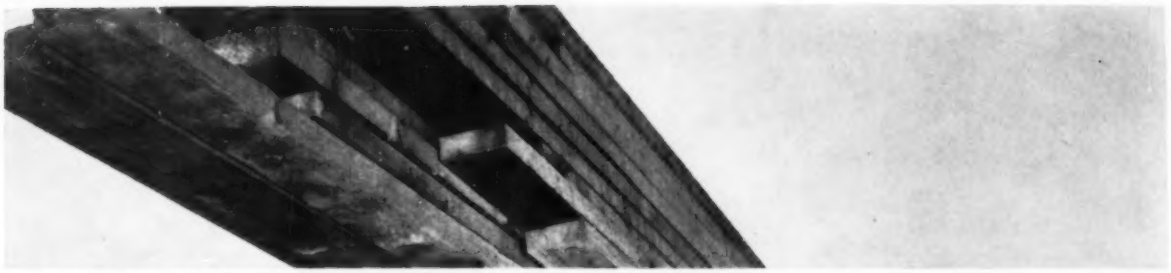
BELTING
leather, Veelos, open end V belting, V belts

LACE
leather, alligator, clipper lace, packing, clamps, couplings, etc.

SHOP EQUIPMENT
Belt Lacer, cutter, fire hose coupler, stripping gauge, etc.

— EVERYTHING MUST GO —
Limited quantities—subject to prior sale

61 S. W. 2nd Ave. near Ankeny—CA 3-1374
Portland 4, Oregon



HOW HYSTER TRUCKS CUT LUMBER HANDLING COSTS

The new Hyster 10,000 and 12,000 lb. Challenger trucks give you big-truck capacity with small-truck maneuverability

Their ability to handle 10,000 and 12,000 lb. loads in a single lift saves valuable hours and manpower in unloading and loading rail cars and highway trucks. You can stack closer, make the most profitable use of your yard space, because the short turning radius and compact design of the Challenger 100/120 trucks makes it easy to maneuver in narrower aisles and close quarters. Compare these Hyster advantages:

PLENTY OF POWER for handling capacity loads rapidly, yet economically.

DUAL RANGE HYSTAMATIC POWER SHIFTING for smooth, effortless control, efficient power application.

POWER STEERING—shortest turning radius in the 10-12,000 lb. class.

FUNCTIONAL DESIGN by Henry Dreyfuss; "human engineered" controls for safe, easy driveability.

Contact your Hyster dealer now, or write for brochure to Hyster Company, P. O. Box 847, Danville, Illinois.

HYSTER COMPANY
INDUSTRIAL TRUCK DIVISION

Factories: Portland, Ore. • Danville, Ill. • Peoria, Ill. • Kewanee, Ill. • Nijmegen, The Netherlands • Glasgow, Scotland • Sao Paulo, Brazil • Sydney, Australia (licensee)

MORE DOUGLAS FIR PLYWOOD has been produced on WILLIAMS-WHITE PRESSES than on any other make

20-opening, 106" x 54", 572-ton hot plate press, one of two for St. Paul and Tacoma Lumber Co.

106th year

the measure of Performance Reliability for more than a century

Throughout the great Northwest, billions of feet of Douglas fir plywood have been — and are being produced on Williams-White presses. As a pioneer in the development of multiple-opening hydraulic hot plate presses, Williams-White engineering leadership and manufacturing experience pay dividends in low operating and maintenance costs, high production and performance reliability. Ask for free engineering consultation and for Bulletin No. 200-A.

WILLIAMS-WHITE & CO

800 Third Avenue, Moline, Ill., U. S. A.

SALES AGENTS: **Portland, Ore.:** Allied Northwest Machine Tool Corp.; **Seattle:** Perine Machinery & Supply Co., Inc.